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ABSTRACT

The 1987 High School Transcript Study was designed to provide educational policymakers with information regarding current course offerings and course taking in the nation's secondary schools. As a part of the study, analysis of course-taking patterns of 1987 graduates were compared with data for 1982 graduates. In the fall of 1987, high school transcripts were collected from 34,140 students, including 6,583 handicapped students, attending 433 schools that has previously been sampled for the National Assessment of Educational Progress (NAEP) in 1986. Approximately half of the students involved in the 1987 study had participated in the NAEP assessment in 1986. The transcript study was designed to satisfy the needs of the National Center for Education Statistics, the National Assessment of Vocational Education, the Office of Special Education and Rehabilitative Services, the Office of Bilingual Education and Minority Languages Affairs, and the National Science Foundation. Information collected from transcripts included, but was not limited to, course lists, graduation requirements, and definitions of units of credit and grades. This report covers study methodology, including extensive discussion of sampling, data collection, data processing, weighting procedures and variance estimation, and transcript study data files. Sampling forms, transcript study questionnaires, a transcript study information packet, modifications to the classification of secondary school courses, definition of description of community and sampling description of community, and A Nation At Risk update study weighting procedures (1987 component) are appended. (TJH)

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Technical Report **June 1989**

High School Transcript Study, 1987

Contractor Report

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1. OVERVIEW AND DESIGN OF THE 1987 HIGH SCHOOL TRANSCRIPT STUDY

The 1987 High School Transcript Study was conducted by Westat, Inc. and its subcontractor, Policy Studies Associates (PSA), for the U.S. Department of Education's National Center for Education Statistics. Additional sponsors of the study were the National Assessment of Vocational Education, the Office of Special Education and Rehabilitative Services, the Office of Bilingual Education and Minority Languages Affairs, and the National Science Foundation. This study provided the Department of Education and other educational policy makers with information regarding current course offerings and course taking in the nation's secondary schools. As a part of this study, Westat conducted analyses of the course-taking patterns of 1987 graduates and comparable analyses of existing data for 1982 graduates. These analyses were used by the Department of Education in its April 1988 report, *American Education: Making It Work*.

In the fall of 1987, high school transcripts were collected from 34,140 students attending 433 schools that had previously been sampled for the National Assessment of Educational Progress (NAEP)[1] in 1986. The sample of students for the transcript study included both handicapped and nonhandicapped students who, in 1985-86, were enrolled in the 11th grade and/or were 17 years old. Approximately half of the sampled students had participated in NAEP assessments in 1986.

1.1 Mandates for the Study

The 1987 High School Transcript Study was designed to satisfy the needs and mandates of several different programs:

- **The National Center for Education Statistics.** Section 421(a)(1) of the Carl D. Perkins Vocational Education Act (20 USC 2421) requires the National Center for Education Statistics to develop "a national vocational education data reporting and accounting system. Section 423 of the Perkins Act further

[1] The National Assessment of Educational Progress is a federally-funded, on-going, periodic assessment of educational achievement in the various subject areas and disciplines taught in the nation's schools. Since 1969, NAEP has gathered information about levels of educational achievement of 9, 13, and 17 year olds across the country.

requires the Center, under section 423, to describe access to vocational programs for handicapped secondary school students.

- **The National Assessment of Vocational Education.** Section 403(a)(1) of the Perkins Act also requires a National Assessment of Vocational Education that will describe and evaluate activities and services delivered to "individuals who benefit from vocational education activities and services assisted under the Perkins Act," including handicapped individuals.

- **The Office of Special Education and Rehabilitative Services (OSERS)** will use Transcript Study information on handicapped students in order to meet its reporting mandate under the Education of the Handicapped Act.

- **The Office of Bilingual Education and Minority Languages Affairs (OBEMLA).** The transcript study also provides information on English as a Second Language courses and on courses taught in a language other than English to language minority students in secondary schools. Under Section 751(c) of the Bilingual Education Act (20 USC 3261), the Secretary of Education was required to submit a report to Congress in February 1988 on the Condition of Bilingual Education.

- **The National Science Foundation** will use information on science and mathematics course taking in high school collected by the High School Transcript Study in its biennial report on science in the United States.

While the 1987 High School Transcript Study was designed to meet the specific needs of these programs, the study was also conducted under the general mandate for the national assessment program. In the Education Amendments of 1978 (20 USC 1221e, Section 406(i)), Congress mandated a national assessment program including collecting data through national education surveys. The National Assessment of Educational Progress (NAEP) is currently conducted under a Department of Education grant to Educational Testing Service (ETS). The primary purpose of NAEP is "the assessment of the performance of children and young adults in the basic skills of reading, mathematics, and communication." NAEP also conducts special assessments of other educational areas, as the need for additional information arises. The Transcript Study provided needed information in other educational areas, particularly with respect to course taking in high school. The 1986 Assessment, which can be linked to this transcript study, obtained data on the knowledge, skills, concepts, understandings, and attitudes possessed by 11th grade American students in the areas of reading, mathematics, science, and computer competence.

A copy of the materials sent to participating schools and districts explaining the study is contained in Appendix A.

1.2 Summary of the Design

The 1987 High School Transcript Study collected and coded: (1) the transcripts of 34,140 students across the country -- including 6,583 handicapped students, (2) additional student information for the handicapped students, provided by the school, and (3) school-level information such as course lists, graduation requirements, and the definition of units of credit and grades.

The sample of schools for the 1987 High School Transcript Study consisted of a nationally representative sample of 491 secondary schools selected for the 1986 National Assessment of Educational Progress, Grade 11/Age 17 students, of which 438 schools agreed to participate and 433 eventually provided transcripts. Within these schools, students were selected for the Transcript Study from the following categories:

- **Students who were sampled for 1986 NAEP**, whether they were assessed or excluded from assessment. Sub-samples of students who were absent for the assessment and of non-11th graders were included.
- **A newly drawn sample of students** who were in the 11th grade in Spring 1986 -- this applied to schools in which we were unable to identify those students who had been sampled or assessed in NAEP (schools that lost their NAEP materials or refused to participate in 1986 NAEP.)
- **All of the handicapped students** in the sample schools who were in the eligible age/grade (17 years old and/or in the 11th grade) in the 1985-86 school year.

The coding system employed was a modification of the Classification of Secondary School Courses[2] (CSSC), containing approximately 2000 course codes, with adaptations as necessary to distinguish levels of courses and to expand the vocational education and special education course codes. The modifications, developed under this contract, are presented in Appendix D. Each course appearing on a student's transcript was assigned a 7-digit code: the first six digits were the CSSC code, based on the course content and level, and the seventh digit indicated whether the course was for special education students only. Course catalogs and other materials and information from the participating schools were used to determine the codes. Additional information coded for each course included grade and credit received.

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[2] Ludwig, M.J., L. Olivetti, N. Sandberg, and B. Waite. *A Classification of Secondary School Courses*. Alexandria, VA: Evaluation Technologies Incorporated, July 1982.

Student information gathered for all students included sex, grade level, age, graduation status, and race/ethnicity. The following additional information was gathered for handicapped students: handicapping condition; severity of cognitive, psychosocial, and physical limitation; reading and mathematics grade level (teacher estimate); placement in mainstream, resource, and self-contained classes; and receipt of selected services.

Student transcript data were weighted for the purpose of making estimates of course taking by students in the class of 1987 nationwide. The final weight attached to an individual student record reflected two major aspects of the sample design and the population being surveyed. The first component, the base weight, was used to expand sample results to represent the total population and reflected the probability of selection in the sample (the product of the probability of selection of the primary sampling unit, and the school and student within the primary sampling unit). The second component resulted from the adjustment of the base weight to account for nonresponse within the sample and to ensure that the resulting survey estimates of certain characteristics (race/ethnicity, size of community, and region) conformed to those known reliably from external sources.

Estimation of sampling errors was performed by an application of the jackknife procedure, defining pairs of groups of first stage sampling units. A set of replicate weights (in this case 36) was attached to each record, one for each replicate. Variance estimation was performed by repeating the estimation procedure 37 times, once using the original full set of sample weights, and once each for the set of 36 replicate weights. The variability among replicate estimates was used to derive an approximately unbiased estimate of sampling variance. This procedure was used to obtain sampling errors for a large number of variables for the whole population and specified subgroups.

2. BACKGROUND OF THE STUDY DESIGN AND OF THE 1986 NAEP SAMPLE DESIGN

2.1 Background and Rationale for the Design

The 1987 High School Transcript Study sample was designed to meet the needs of a wide range of analyses. Two major requirements at the commencement of the study had a strong impact on the design of the sample. First was the need to obtain transcript data on students who were assessed in the age 17/grade 11 component of the 1986 National Assessment of Educational Progress. These transcript data were to be linked with the assessment data for analysis. Secondly, transcript information was required for a sizeable sample of handicapped students.

These two considerations led to the use of the design, described in Section 3, in which to the greatest extent possible schools that had participated in the 1986 NAEP assessment were included in the sample. Also, it was decided that in all schools selected all eligible handicapped students should be included in the sample.

Two other factors then arose that influenced the final design substantially. First, only about half of the schools that had participated in NAEP in 1986 had (as requested) retained the materials essential for obtaining transcripts linked to assessed students. Because of this, and also as a result of school nonresponse in NAEP itself, Transcript Study samples of students were sought not only from those schools with links to NAEP assessed students, but from all schools in the original NAEP sample (except those refusals successfully substituted for in NAEP). This was done so that nonresponse bias would be minimized for those analyses not involving NAEP assessment data. The second factor was that it was desirable to reduce costs by reducing the sample size of certain classes of students (those not in grade 11 in 1986, students selected for NAEP but absent from the assessment). Thus, subsampling of these groups was introduced in schools with NAEP sampling materials.

These various influences resulted in the sample design described in Chapters 2 and 3. The basis for this design was the NAEP sample of schools and students for age 17/grade 11, the details of which are described in the remainder of Chapter 2. The actual sampling procedures for

1987 High School Transcript Study are described in Chapter 3. The complexity introduced by "piggybacking" the transcript study sample design onto the 1986 NAEP design is reflected in the complex weighting procedures discussed in Chapter 6.

2.2 The 1986 NAEP Sample Design

The Age 17/Grade 11 sample for 1986 NAEP was a multistage probability sample. Counties, or groups of counties, were the first-stage sampling units, and secondary schools were the second-stage units. The third stage of sampling consisted of the assignment of sessions, by type, to sampled schools, and the fourth stage involved selection of students within schools and their assignment to sessions. A total of 94 primary sampling units (PSUs) were included in the sample, and a sample of 433 schools participated in the main NAEP assessment. Various blocks or packages of exercises were administered in these schools to about 47,000 students who were 17 years old or in grade 11. Of those, about 3,500 were assessed as part of a Language Minority Probe designed to obtain more detailed information on the personal background of students of Hispanic, Asian and American Indian heritage, in addition to measuring reading and writing skills.

The bulk of students were assessed using test booklets that were "spiralled", i.e. systematically interspersed and distrubuted to students in a particular order. About one in four spiralled booklets were part of a Foundations of Literacy assessment and tested students' knowledge of American history and literature. The remaining booklets covered reading, mathematics, science and computer competence. Separate from the Language Minority Probe and spiralled samples, about 4,000 students participated in a special assessment of reading and writing designed specifically to "bridge" back to NAEP assessments in previous years and measure trends in achievement levels over time. In the description that follows, the bridge assessments are also referred to as "tape" because the tests were administered using a tape recording to read instructions and pace the exams.

2.3 PSU Sample

2.3.1 The Definition of Primary Sampling Units

The PSU sample design for 1986 NAEP was a stratified probability sample with one PSU selected per stratum, with probability proportional to population. A PSU consists of a Metropolitan Statistical Area, a county, or group of contiguous counties in the U.S. (including Alaska and Hawaii). A total of 94 PSUs (counting the New York Metropolitan Area as three PSUs) was selected.

The PSU sampling frame for 1986 NAEP was constructed by grouping counties following specific rules as follows:

- Each 1980 MSA was considered a separate PSU except that the New York MSA was divided into 3 PSUs, and in New England, where NECMA's were the PSU unit.[1]

- Non-MSA PSUs were made to consist of sets of geographically contiguous counties, within a state whenever possible, with a minimum 1980 total population of 60,000 persons. In a few cases, counties bordering a state line were grouped to form a PSU.

- With the sole exception of the Washington DC PSU, which was composed of the Washington, DC-MD-VA SMSA, region boundaries were not crossed in the definition of a PSU, not even in the case of MSA's. Generally, if a county in an MSA was in a separate region it was taken out of the MSA and grouped with other contiguous counties in its region to define a PSU.

Checks were made to ensure that every county was included in one and only one PSU, and that every PSU satisfied the 60,000 minimum population requirement.

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[1] In New England MSA's may consist of part counties. A NECMA (New England County Metropolitan Area) is a definition approximating MSA's but consisting of whole counties.

2.3.2 Definition of PSU Strata and Identification of Certainty PSUs

From the 1980 Census, the following variables were determined for each PSU in the frame:

- 1980 Census population
- 1970 population
- Hispanic population
- Black population
- Civilian employment
- Rural population
- Urban population
- Population in elementary and secondary schools
- Manufacturing employment
- Educational expenditure

The following were computed for each PSU:

- Percent population change, 1970 to 1980
- Percent Hispanic
- Percent Black
- Percent rural
- Percent in manufacturing
- Percent urban population
- Educational expenditure per capita

The main stratification variables for the PSU sample were:

- Region of the country (definition used by the Office of Business Economics, Department of Commerce)
  - Northeast
  - Southeast
  - Central
  - West
- Type of PSU
  - MSA
  - Non-MSA

- Percent minority (Hispanics + Blacks)[2]
  - Regular (less than 20 percent minority)
  - High minority (20 percent or more minority)

Within the resulting 12 subuniverses, stratification was implemented by ordering the PSUs before sampling on the basis of the following variables:

- Percent minority
  - Under 10 percent
  - 10 to 19 percent
  - 20 to 39 percent
  - 40 to 59 percent
- Percent population change (absolute value) (Classes defined in multiples of 10 percent change)
- Educational expenditures per 1,000 persons (Classes defined in multiples of $100)
- For MSA PSUs only
  - Percent manufacturing (Classes defined in multiples of 10 percent)
- For non-MSA PSUs only
  - Percent rural (Classes defined in multiples of 10 percent)
  - Percent urban
    - < 20 percent
    - 20 to 40 percent
    - 40+ percent

Because of their large total population -- more than 75 percent of an average stratum total population -- 34 PSUs (counting New York as three PSUs) were defined as PSU strata and were drawn into the sample with certainty.

The allocation of the 60 noncertainty sample PSUs to the 12 subuniverses was approximately proportional to total population in the subuniverse after removing certainty PSUs.

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[2] In the Northeast and Central regions no minority strata were defined.

Table 2-1 shows the actual allocation and average stratum size used in the stratum definitions for PSU selection. For noncertainty PSUs, one PSU was sampled from each of the 60 strata. For high minority PSUs the strata were defined to be approximately half as large as for the remaining PSUs, as an initial step in oversampling high minority schools.

Table 2-1. Allocation of noncertainty PSUs to strata (one PSU per stratum)

Region	Regular stratum			High-minority stratum		
	Total population (000)	Number of strata	Average stratum size (000)	Total population (000)	Number of strata	Average stratum size (000)
MSA PSUs						
Northeast	21,033	8	2,629	–	–	–
Southeast	13,489	4	3,372	9,557	6	1,593
Central	25,004	8	3,126	–	–	–
West	13,005	4	3,251	8,007	6	1,335
	72,531	24		17,564	12	
Non-MSA PSUs						
Northeast	5,832	2	2,916	–	–	–
Southeast	9,718	4	2,430	9,649	6	1,608
Central	17,469	6	2,912	–	–	–
West	8,531	4	2,133	3,197	2	1,599
	41,550	16		12,846	8	

After the number of strata and the desired stratum sizes were determined, the stratum boundaries were defined as follows. Within a PSU class, region, and stratum type, the file was ordered by the stratification variables indicated above, and stratum boundaries were established based on the desired average stratum size for each of the 12 subuniverses. The size of each stratum was constrained to be within 100,000 of the desired size.

2.3.3 Selection of Noncertainty PSUs

In each noncertainty stratum, one PSU was selected as follows:

(a) Let i or j identify the PSU

N = total number of PSUs in the particular stratum

S_i = measure of size (PSU population) $i = 1, ..., N$

$$S'_i = \sum_{j=1}^{i} S_j$$

= cumulative measure of size

$$S = S'_N = \sum_{i=1}^{N} S_i$$

(b) Select a random number $1 \leq R \leq S$.

(c) Select the i-th PSU, where

$S'_{i-1} < R \leq S'_i$.

This ensures that the probability of selection of PSU i is S_i/S.

2.4 School Sample

2.4.1 Frame Construction

A school was considered eligible for sampling if it contained any of grades 9, 10, 11 or 12; served as the enrolling high school for at least one student; and was located within the counties comprising the 94 PSU sample. A commercially available list of school buildings was purchased from Quality Education Data (QED), and was subset to eligible schools only. To this file were added data from the Office of Civil Rights on percent minority enrollment.

For each school, estimates were made of the number of students that either were in grade 11 in 1985-86, or whose birthday fell between 10/1/68 and 9/30/69. The QED file gives

total enrollment and the grade range for each school, thus providing the average enrollment per grade. For each grade, the proportion of students eligible by birthdate or by grade was estimated from the Current Population Survey (CPS) for October 1983 and October 1984. Estimates of the total number of eligible students were obtained by applying these CPS eligibility proportions to the enrollment per grade and summing over the grades in the school.

Before selecting the sample of schools, the following was also done:

- Estimates of eligibles were rounded up to whole numbers:
- For public and parochial schools, missing values of OCR percent Black were recoded to 40 whenever the QED percent Black was greater than 39. (The QED figure was at the district/diocese level and was based on 1980 Census tract data.)
- High-minority schools were identified for oversampling. If OCR percent Hispanic, percent Black and percent Asian were all missing, the school was classified as *not* high-minority; otherwise, the school was classified as high-minority if the proportion Hispanic, Black and Asian was greater than 0.1 for a large school or if the number of grade or age eligible Hispanics, blacks and Asians was at least 10 for a smaller school. A school was called large if its estimated number of eligible students was at least 200.

2.4.2 Measures of Size and Sample Selection

A measure of size was assigned to each school according to the following scheme. Let E_i denote the estimated number of grade or birthdate eligible students in school i. For schools not classified as high-minority, the measure of size was

.25	if E_i was less than 7
$E_i/20$	if E_i was greater than 6 but less than 20
1	if E_i was greater than 19 but less than 200
$E_i/200$	if E_i was greater than 200

For schools classified as high-minority, the measure of size was doubled.

The number of schools to be selected in a PSU was determined so as to attain, nationally, the target 1986 NAEP student sample size (adjusted for attrition) and so that the probability of selection of a student would be uniform over the United States (exceptions are very small schools and high minority schools), given that all students in schools with fewer than 200 eligible students would be selected and that 200 students would be selected in larger schools. That number of schools was then selected systematically with probability proportionate to the assigned measure of size, after identifying the schools whose measure of size was greater than the sampling interval and so were selected with certainty (i.e., probability 1).

2.4.3 Updating the School Frame and Sample

QED updates its school list annually and periodically incorporates into the file changes in school characteristics. In addition, the NAEP school frame and sample was updated at the time the district superintendent (or equivalent school official in private and parochial schools) was contacted, and again when telephoning school principals or coordinators to set up introductory meetings. Based on this information, "new" schools, as defined by school openings or changes in grade span, were added to the frame, assigned a measure of size and given a chance of being added to the sample.

As indicated earlier, the school update was carried out only in districts that had schools in the sample. Thus, in assigning an inclusion probability to a "new" school, we incorporated the probability of selection of the district. To determine whether or not to include a "new" school in the sample, we computed:

$$P(\text{school}|\text{district}) = \frac{P(\text{school})}{P(\text{district})}$$

If $P(\text{school}|\text{district}) \geq 1$ we set $P(\text{school}|\text{district}) = 1$ and included the school in the sample. Otherwise, we included the school in the sample with probability $P(\text{school}|\text{district})$.

The update process resulted in a frame of 15 schools. Following the selection procedure described above, one school was drawn into the sample, but was ultimately discovered to be located outside the bounds of our PSU sample and so was dropped.

2.4.4 School Substitution

In 1986 NAEP the effect of refusals was evaluated on a PSU-by-PSU basis, and the determination of which refusing schools were to be replaced was based on their size, affiliation, and minority status. Nonparticipating schools were replaced by substitutes when the participating schools were not a reasonably representative subset of the initial sample and/or the participating schools could not produce the number of completed assessments required for the PSU. No substitutions were made for schools with fewer than seven age-eligibles.

To minimize bias, a substitute school should resemble the original selection as much as possible. We selected substitutes by trying to match on the following attributes, listed here in priority order:

- estimated number of eligibles;
- affiliation;
- grade span (i.e., contained modal grade or not); and
- minority composition

A substitute was always selected from the same PSU as the refusing school.

When school nonparticipation was due to district refusal, none of the schools in the refusing districts were considered substitute candidates. However, when substituting for refusals due to principals' refusals, preference was given to substitute candidates in the same district.

If the initial substitute was refused or found to be ineligible, we repeated the procedure described above, as time permitted, until a cooperating substitute was identified. Twenty-four substitutes were added to the sample by the above procedure.

2.5 Assignment of Sessions to Schools

Target numbers of completed assessment booklets by PSU played an important role in the sample design. Preliminary projections of completed test booklets by school were made as a part of the school sample selection procedure based on estimates of eligibles from QED data (see Section 2.4.1). As school cooperation status was determined, the maximum number of students to be sampled within each school was "fine tuned." A cutoff was established to achieve, in expectation, the desired number of students assessed over all PSUs combined.

2.5.1 Updating Estimates of Age- and Grade-Eligibles Using the Principal's Questionnaire

The NAEP Principal's Questionnaire, distributed to schools during the introductory meeting and returned to Westat by the school, provided up-to-date information on grade-by-grade enrollment and a percentage breakdown of students by race/ethnicity. This information formed the basis on which improved estimates of eligible students were made for each participating school.

The general equation used to estimate age eligibles may be represented by:

$$A_j = \sum_{i=9}^{12} E_{ij} \sum_{e=B,H,O} A_{RSei} P_{ej}$$

where

- j identifies the school;
- e identifies the racial/ethnic group: Black, Hispanic, Other;
- R identifies the region;
- S identifies the Sampling Description of Community (SDOC);
- P_{ej} is the percent in ethnic/racial group e, as reported on the principal's questionnaire by school j;

A_{RSei} is the CPS estimate of the proportion of grade i enrolled students who are age eligible. Those proportions were estimated separately for three racial/ethnic groups by Sampling Description of Community within region.

E_{ij} is the PQ-reported grade i enrollment for school j.

Estimates of grade-and/or-age-eligible students were calculated by adding the total enrollment in the modal grade, E_{11j}, to the estimate of age eligibles in the three non-modal grades: 9, 10 and 12.

The values of A_{RSei} were developed by combining October CPS estimates of school enrollment by age and grade from four successive years, 1981-1984.

Let

B_{RSeiy} = the year y CPS estimate of the total age eligibles of racial/ethnic background e, enrolled in grade i, in schools located in SDOC S within region R;

D_{RSeiy} = the year y CPS estimate of the total of racial/ethnic background e, enrolled in grade i, in schools located in SDOC S within region R.

Adopting the convention that

$B_{RSe13y} = D_{RSe13y} = 0$, then

$$A_{RSei} = \frac{\sum_{k=i-1}^{i+1} \sum_{y=1981}^{1984} B_{RSeky}}{\sum_{k=i-1}^{i+1} \sum_{y=1981}^{1984} D_{RSeky}} \quad \text{for } i = 9 \text{ to } 12.$$

Occasionally, the sparseness of data required the collapsing of cells across several levels of Sampling Description of Community.

2.5.2 Allocation of Sessions

A random subsample of schools was allocated tape sessions (booklets 4 and 5). The tape assessment was spread across the entire 94 PSU sample. The target number of completed tape booklets was constant across PSUs except for Chicago and Los Angeles, each of which because of its size was allocated three times the normal share. The NAEP design specified that schools smaller than a certain size would have all eligible students sampled. All larger schools would have a fixed number of eligibles sampled. For each school, after updating the estimate of age and grade eligibles using the Principal's Questionnaire, we applied the resulting student sampling fraction to estimate a_k, the number of age eligibles that would be sampled from that school. We formed clusters of schools within each PSU, first by sorting the schools by a_k, then while passing through the list, grouping together successive schools until their aggregated a_k surpassed a cluster cutoff equal to 1/98th of the total desired sample size adjusted for nonresponse. A measure of size was created for each cluster by dividing the aggregate a_k by the cluster cutoff and rounding down. Using PPS sampling, we selected two clusters per PSU (six in Los Angeles and Chicago). PSU by PSU, half the selected clusters were allocated Booklet 4 and half, Booklet 5, at random. The cluster cutoff divided by the cluster-aggregated a_k was the proportion of sampled students set aside for tape assessment in each school within the cluster. The remaining proportion of sampled students were invited to the spiral assessment. Under this scheme we identified those tape-allocated schools where sampling for both spiral and tape sessions would result in an assessment with five or fewer students invited. A random fraction of these schools were made tape-only, the remainder, spiral-only. The fraction was chosen so that for each of tape booklets 4 and 5, the expected number of completed assessments across the entire PSU sample was 2,000. All NAEP-selected schools hosted a spiral assessment except those that became tape-only in the manner just described.

2.6 Student Sample

The sample of students was systematically drawn from school-prepared lists of eligible students. Student Listing Forms were prepared by each participating school; the names of all enrolled students whose birthdate fell in the specified range and all others in grade 11 were entered on the Student Listing Forms (see Appendix B). There were three listing forms per school. The first list contained eligible students that the school had identified as Hispanics, the

second, Asians and American Indians and the third, all remaining students. Except as noted below, the spiral and tape student samples were systematic samples drawn from the three lists combined, as if they constituted one long list.

2.6.1 Within-School Sampling Rates

Let

G_i = PQ estimate of eligibles for school i.

Then the sampling rate applied to the list of eligible students to select the combined sample for spiral and tape assessment is given by

$$R = \frac{209.7}{G_i}, \quad \text{if } G_i > 233$$

$$\text{or } 1, \quad \text{otherwise.}$$

The majority of schools were allocated spiral sessions, but no tape sessions. For these schools the sampling rate applied to the list of grade-and/or-age eligibles to produce the spiral sample was $R_S = R$. A small number of schools were allocated tape sessions only. For this group the rate applied to the list of age eligibles to produce the tape sample was $R_T = R$. When both spiral and tape sessions were allocated to a school the combined spiral and tape sample selected at rate R was partitioned into two subsamples, one for spiral and the other for tape.

For a school tape-allocated as part of cluster c, the fraction of the combined spiral/tape student sample that was earmarked for tape was

$$R_T^c = \frac{\text{Target tape sample size for cluster c}}{\text{Estimated age eligibles among spiral/tape sampled students within cluster c}}.$$

Therefore, in schools allocated both tape and spiral sessions, the rate applied to the list of age eligibles to produce the tape sample was

$$R_T = (R)(R_T^c) .$$

In schools allocated both tapes, booklet 4 was alternated with booklet 5 in the final assignment to tape-selected age eligibles.

The rate used to select grade-and/or-age eligibles for spiral assessment was

$$R_S = (R)(1 - R_T^c) .$$

except for students classified by the school as Asian or American Indian. A random half of such students was given the Language Minority Assessment instead.

2.6.2 The Session Assignment Form

To control the student sampling operations as closely as possible, Westat generated a Session Assignment Form (see Appendix B) for each school where sampling was to be carried out. This computer-generated form specified:

- Whether spiral and/or tape sessions were to be administered at the school;
- The line numbers (from the Student Listing Form) specifying the students to be drawn into the sample for spiral and tape;
- The specific book number(s) to be used if tape sessions were to be conducted at the school;
- The minimum and maximum number of students listed on the Student Listing Form that could be accepted without requiring revision to the within-school sampling rates (see Section 2.6.4).

2.6.3 Sample Selection

Generally, the district supervisor carried out the sampling of students a week prior to the assessment. Before carrying out the sampling, the supervisor reviewed the Student Listing

Forms and made comparisons with other information in an effort to make sure that the list included all eligible students. Sampling was carried out according to very specific instructions described in the supervisor's manual. Statisticians were available by telephone to assist in the resolution of sampling problems and to generate revised Session Assignment Forms when necessary.

Briefly, the Spring assessment sample selection procedures involved the following:

1. Numbering sequentially the lines listed on the Student Listing Form or computer-generated list.

2. If spiral sampling was required, recording an "S" (indicating sampled for spiral) for every student whose line number corresponded to spiral line numbers given on the Session Assignment Form.

3. If tape sampling was required, identifying as sampled for tape those students with tape sequence numbers corresponding to the tape line numbers on the Session Assignment Form, and then identifying age-eligibles with an "X".

4. If more than one tape session was assigned to the school, the students sampled for tape were assigned cyclically to the several sessions.

5. Designating half of the spiral selected Asians and American Indians as selected for the Language Minority Probe.

The procedures described above were modified in some instances to allow the use of classroom sampling, as discussed in the following section.

2.6.4 Supporting the Field Staff on Sampling Issues

The completed Student Listing Form generally contained a number of students, S_i, which was different from the number, G_i, estimated from Principal's Questionnaire or QED data. In order to control the total number of students tested per school, an acceptable range for S_i was specified (often, the interval $[.8\ G_i, 1.2\ G_i]$). Whenever the total number of students listed on the Student Listing Form was outside the specified range, the supervisor contacted the sampling statisticians by telephone. A new set of line numbers, based on revised sampling rates, was then generated, a revised Session Assignment Form was produced using a microcomputer, and the revised sampling rates were entered on the weight file.

Occasionally, a school insisted that we select the sampling of grade eligibles by whole classes, to minimize disruption. In such cases care was exercised to also sample age- or grade-eligible students who were not members of the specified classes at the same rate as the classroom sampled students.

2.6.5 The Sample of Excluded Students

The 1986 NAEP Assessment, as in previous assessments, excluded students who were functionally handicapped to the extent that they could not participate in the assessment as it was normally conducted. Specific groups excluded were:

- Students with limited English proficiency;
- Students identified as having behavioral disorders; and
- Students physically or mentally handicapped, including Educable Mentally Retarded (EMR), in such a way that they could not respond to NAEP exercises as they were normally administered.

In 1986 NAEP a sample of excluded students was drawn and data collected about them. In most cases, students to be excluded from assessment were identified before sampling but were sampled at the same rates as any other eligible student. In other cases, excluded students were identified only for students selected for the sample.

For each sampled excluded student, an Excluded Student Questionnaire, which focused on the nature of the student's problem and the school's approach to handling it, was filled out by school personnel. This data collection effort for excluded students permits national estimates of this subgroup of age- and grade- eligible students.

2.6.6 1986 NAEP School and Student Participation Results

Tables 2-2 and 2-3 summarize school and student participation in 1986 NAEP.

Table 2-2. Summary of 1986 NAEP school participation experience

Cooperating schools	433
Original selections	409
Spiral allocated	401
Tape-only allocated	8
Substitutes (spiral allocated)	24
for district refusals	16
for schools refusals	8
Refusing schools: Original, unsubstituted	66
District refusals	29
School refusals	37
Out of scope schools: Original selections	55
Out-of-range or closed	33
No age eligibles	22
Total school sample	554

Table 2-3. Summary of 1986 NAEP student participation

Assessment type	Subgroup	Assessed		Absent	Excluded	Total
		Foundations of Literacy	Other subjects			
Spiral or Language minority	Grade 11	7,812	26,693	7,658	1,283	43,446
	Other grade	1,962	6,752	4,302	890	13,906
Tape	Schools with: Spiral & tape	0	3,791	1,003	130	4,924
	Tape only	0	77	18	0	95
	Total	9,774	37,313	12,981	2,303	62,371

3. SELECTION OF SCHOOLS AND STUDENTS FOR THE 1987 HIGH SCHOOL TRANSCRIPT STUDY

3.1 School Sample

3.1.1 Initial Sample of Schools

The 1987 High School Transcript Study was conducted using as a basis the sample of schools selected for the Age 17/Grade 11 spiral assessment component of the 1986 National Assessment of Educational Progress (NAEP) and, where possible, the NAEP sample of students within those schools. This sample of schools represented regular schools[1] in the 50 states and the District of Columbia with students enrolled in 1985-86 who were in grade 11, or seventeen years old (born between 10/01/68 and 09/30/69). This is the population of interest for the Transcript Study.

Full details of the design of the NAEP school sample are given in Chapter 2. The set of schools approached for the Transcript Study consisted of three components: the schools originally selected for NAEP spiral assessment that participated in NAEP in 1986; the substitute schools that participated in 1986; and those originally selected schools that refused to participate in NAEP but for which no substitute was made. Thus, this combined school sample gave the maximum opportunity for including schools that had participated in NAEP spiral assessment (one of the major initial objectives of the Transcript Study), while maintaining a full sample of schools subject to little nonresponse bias. That is, the effect of NAEP school and district nonresponse has a potential biasing effect for the Transcript Study only to the extent that substitute schools differed from the refusals which they replaced. As discussed in Chapter 2, these differences are expected to be small. The resulting sample consisted of 491 schools, which was later expanded to 497 schools because of substitution in one district, discussed below. Details of the sample counts of schools in these different sampling categories are included in Table 3-1.

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[1] These schools were "regular" in the sense that they were not schools whose enrollment was limited to special education, incarcerated, or institutionalized students and whose curriculum was not limited to vocational education. Students in the eligible schools might attend classes at a specialized school but must have been enrolled in a "regular" school.

Table 3-1. Transcript Study school sample and its relationship to NAEP school samples

NAEP samples	Cooperating in Transcript Study			Refusal	Out-of-scope	Total
	Retained NAEP materials	Did not have NAEP materials	Total cooperating			
NAEP 1986						
Cooperating original	192	171	363	25	13 *	401
Substitute	10	13	23	1	–	24
Refused, not substituted	–	42	42	19	5	66
NAEP 1988*	–	6	6	–	–	6
Total	202	232	434	45**	18	497

*Ten schools from 1986 NAEP from a single school district were replaced by six schools from 1988 NAEP from the same district. These six new schools brought the total to 497; the ten schools were classified as "out-of-scope."

**434 schools agreed to participate; transcripts were eventually received from 433.

3.1.2 Recruitment of Schools and Substitutions

The initial sample of 491 schools was approached, through districts and dioceses where appropriate, to solicit participation in the study. A high level of cooperation was obtained, as shown in Table 3-1. Even a substantial proportion (69%) of those schools that had earlier refused to participate in NAEP participated in the Transcript Study.

Substitution was used only in one special case. In one certainty PSU, a large school district agreed to participate in the transcript study in general, but refused to allow access to the 10 selected schools in the district which had participated in 1986 NAEP. An alternative sample of schools, approximately representative of the district for age 17/grade 11 students in 1986, was obtained by using the 6 schools from the district sampled for 1988 NAEP. The district was in favor

of using the same schools for 1988 NAEP and the Transcript Study. This sample of schools represented all schools in the district with a grade in the range of 9 through 12, based on information current at about August 1986 (as represented in the 1986 QED school file), and this would include to a very great extent all schools with an 11th grade in 1985-86. This increased the sample of schools to a total of 497 schools, with the 10 earlier sample schools from this district being designated as out-of-scope. A few additional schools were found to be out-of-scope, even though they were included as in-scope for NAEP. Five such schools were NAEP refusals for which little information was available at the time of NAEP assessment, but which were found by the Transcript Study to be out-of-scope. Furthermore, when contacted for the transcript study, three schools that had participated in NAEP were found to have contained only students who were actually enrolled elsewhere. To eliminate the double chance of selection for their students, these schools were also deemed to be out-of-scope.

Of the sample of 479 in-scope schools, 34 refused to participate and another 11 were nonrespondents for a variety of other reasons (e.g., the NAEP materials had been lost and there were no eligible students under the "New List" procedures). In all, 434 schools agreed to participate in the Transcript Study, and transcripts were eventually received from 433.

3.2 Sampling of Students

Two distinct sets of sampling procedures were used within schools, depending upon whether or not schools had retained the materials used in sampling and assessing students in 1986 NAEP. In both types of schools, the sample included all handicapped students who were in the 11th grade and/or were 17 years old in 1985-86. A "handicapped" student was defined as one who had had an IEP (Individualized Educational Program), and was not classifed as "gifted," in 1985-86.

3.2.1 Sampling of Students in "New List" Schools

"New List" schools are schools that had refused to participate in 1986 NAEP, or who did not have available at the time of the Transcript Study sampling the 1986 NAEP student Administration Schedules. Such schools were asked to provide a sample of student transcripts in the following manner:

(1) The school was asked to provide to the Westat field representative a list of students enrolled in the 11th grade in 1985-86. This procedure meant that in "New List" schools, the nonhandicapped students were 11th graders only. Very occasionally a school was able to provide only a list of the graduating class in 1987, and this list was used in place of the desired enrollment list in those cases. Handicapped students were removed from list number (1) and placed on the list discussed in (3) below.

(2) Using prescribed line numbers, the data collector drew a sample of about 75 students from the enrollment list, selecting all students when the list contained 80 or fewer. The school was then asked to provide transcripts, demographic information, and exit status for the selected students.

(3) In addition, the school was asked to provide a list of all handicapped students born between October 1968 and September 1969, plus any others enrolled in grade 11 in 1985-86. All such students were included in the sample for the school. In addition to requesting transcripts and the same information as for regular students, the school was asked to fill out a Special Education Student Questionnaire for each such student.

3.2.2 Sampling of Students in "NAEP List" Schools

For schools that had participated in NAEP in 1986, and that had, as requested, retained the NAEP Administration Schedules, transcripts were obtained from a subset of the students who were selected in the NAEP sample (including "excluded" and absent students), as well as all eligible handicapped students from the school. This was possible in these schools and only in these schools because the Administration Schedules provided the only link between the NAEP assessment and the particular individual student, and hence his/her transcript, for students invited for NAEP assessment. For NAEP excluded students, both the Student Listing Forms and the Roster of Questionnaires were needed to obtain this link.

To limit the volume of transcript requests, while retaining as many as possible of the students in the 11th grade who took the specific NAEP assessments of interest,[2] the following procedures were used to sample students in these schools, using the NAEP sample as a base:

(1) All NAEP selected excluded students were retained in the 1987 High School Transcript Study sample.

(2) Among the students invited for assessment:

  (a) All students who were invited to Tape sessions were excluded from the Transcript Study sample;

  (b) All students who were assessed using the Foundations of Literacy assessment booklets were excluded from the Transcript Study sample;

  (c) All other 11th grade assessed students were retained in the Transcript Study sample; and

  (d) From among the remaining students -- that is, all invited absent students and all non-11th grade students assessed other than for the Foundations of Literacy assessment, a 25 percent systematic subsample of students was retained for the Transcript Study. The subsampling was done in the Westat office using copies of the NAEP Administration Schedules. Marked copies of these schedules were then matched to those in the field to determine the names of the students to be retained in the sample.

(3) As in schools with no NAEP materials, a list was compiled of all handicapped students enrolled in grade 11 in 1985-86 and/or born between October 1968 and September 1969. All such students were included in the transcript study, and the school was asked to complete a Special Education Student Questionnaire for each such student, in addition to providing transcripts and demographic data. These students were removed from the lists formed in (1) and (2) above to avoid giving them a double chance of selection.

Thus, in both types of schools probability samples of 11th grade nonhandicapped students were obtained, as well as all eligible handicapped students. In New List schools, probabilities of selection were derived from knowledge of the sampling interval used to draw the systematic sample. For NAEP list schools, non-11th grade nonhandicapped students born between October 1968 and September 1969 were represented. The probability of selection for each nonhandicapped student in a NAEP list school was derived using knowledge of Student Listing

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[2] Specific NAEP assessments which were of interest for the transcript study were all spiral (not tape) assessments except "Foundations of Literacy."

Form type (see Chapter 2), the student's age and grade, and knowledge of whether the student was excluded, assessed, or absent. In each type of school, both grade- and age-eligible handicapped students were completely enumerated.

3.2.3 Nonresponse Within Schools

Since transcripts were requested for assessed, absent, and excluded students in schools using NAEP materials, there is no residual effect of NAEP nonresponse on the transcript study, other than through the inclusion of NAEP substitute schools. However, the systematic exclusion of nonhandicapped non-11th graders from selection in schools that did not have NAEP materials introduces a type of nonresponse bias. A weight adjustment designed to reduce this bias is described in Section 6.2.2. Unrelated to this, though, there were situations where selected transcripts were not included in the final coded set of transcripts. The unweighted proportions of requested transcripts received, classified by NAEP list vs. new list schools and handicapped status are given in Table 3-2. Among the four classes of students defined by these dichotomies the overall response rate exceeded 94 percent in each case. Weighting adjustments were made to account for the effect of the differential nonresponse rates.

Table 3-2. Rates of response to transcript requests from cooperating schools

Handicapped status	Type of sampling list	Number transcripts requested	Percentage received and coded
Nonhandicapped	New NAEP	12,951 15,306	98.3% 96.9%
Subtotal nonhandicapped		28,257	97.5%
Handicapped	New NAEP	3,764 3,159	94.0% 96.3%
Subtotal handicapped		6,923	95.1%
Total		35,180	97.0%

In addition to the nonresponse among requested transcripts, there was also a proportion of students for whom, following the prescribed sampling plan, transcripts should have been requested but were not. The extent of this nonresponse component is known only for the nonhandicapped students in NAEP list schools, since for this group only copies of the NAEP sampling materials, used to derive the transcript study sample, were retained in the Westat office. This is the subgroup where failure to request transcripts for students who should have been selected is expected to be by far the most extensive, due to the complex sampling procedures involved, and the need to use NAEP materials within the school. Of the 16,328 nonhandicapped transcripts which should have been selected in NAEP list schools, 93.7 percent (15,306) were in fact requested. Combining this with the 96.9 percent response rate for requested transcripts in this group, the overall within school response rate for these students is 90.8 percent.

Sources of these nonresponse components occurring within schools included the following:

(i) In some schools with NAEP administration schedules, either the Student Listing Forms or Roster of Questionnaires were missing. This made it impossible to identify, and hence

request transcripts for nonhandicapped students who were excluded from NAEP. This accounts for a sizeable proportion of the 6.3 percent of nonhandicapped student transcripts that were not requested, but should have been, in NAEP list schools. Such students are likely to have had language difficulties or some form of temporary disability.

(ii) Also contributing to the failure to request transcripts appropriately were errors in the subsampling of students on the photocopies of the administration schedules, and failure to match students selected in this way to the school copy of the administration schedule, which contained student names. Considering the quality of the photocopied materials, the complex subsampling rules that were imposed, and the wholly clerical nature of the task, the overall "request rate" achieved for the subsampled assessed and absent students can be considered high.

(iii) Among all schools, there was occasional difficulty in locating requested transcripts. This occurred largely for students who had transferred or dropped out, with some schools being unable to supply transcripts for non-graduates. These sources were largely responsible for the 2.9 percent of requested transcripts that were not received and coded.

(iv) Occasionally the photocopy of a transcript, produced in the school, was of such poor quality as to be unreadable for the purposes of coding. In some cases also, the list of courses taken or credits obtained could not be linked in any useful way to the coded list of courses for the school, or the school's policy for giving credits. In these few cases, the transcript, although requested and received, was not included in the set of coded transcripts.

For handicapped students, nonresponse to the Special Education Student Questionnaire resulted on occasion. This occurred in almost every case where a transcript was unavailable (those few cases with Special Education Student Questionnaire data and no transcript have not been included on the dataset produced from the study). In addition, there was some nonresponse to the questionnaire even when a transcript was received. In most cases, this was because the student's special education teacher was no longer at the school and no other respondent could be found who could supply the information. Weighting adjustments have been applied to the Special Education Student Questionnaire data file to account for this nonresponse. Of the 6,583 handicapped students for whom a transcript was received, an SESQ was completed for 6,069 of them (92.2%).

4. DATA COLLECTION

Groundwork for the 1987 High School Transcript Study was laid in 1986 with the selection of schools and students for the 11th Grade/17 year old NAEP assessment. In the fall of 1987, Transcript Study staff contacted the schools previously sampled for NAEP, made arrangements to access NAEP sample information or to draw a new sample of students, and obtained the high school transcripts of the sampled students. On-site data collectors identified the sample of students, requested the transcripts, and gathered additional information about the students and schools. In September Transcript Study field supervisors and data collectors contacted districts and schools and obtained their cooperation. Data collection took place over a two-month period, October through November, 1987. The data collection activities are described in the remainder of this Chapter.

4.1 Training Field Supervisors and Data Collectors

Eight field supervisors, each of whom was experienced in supervising Westat data collection activities, attended a three-day training session in late August to prepare for the study. Seven of the supervisors were responsible for data collection in specific regions of the country. Regions were assigned based on supervisors' place of residence. The eighth supervisor functioned on an at-large basis when needed.

Supervisor training consisted of: (1) background information on the study, including coordination with ongoing activities of NAEP; (2) training in the supervisors' specific responsibilities (contacting districts and schools, securing cooperation, obtaining course catalogues and other school information, and making arrangements for data collection); (3) recruiting, hiring, and supervising data collectors; and (4) assisting in training sessions for data collectors.

Data collectors, who were hired by and worked with the field supervisors, attended a four-day training session in late September. Like the supervisors, the 105 data collectors were experienced field staff, having worked on previous education studies for Westat, primarily NAEP. Training focused on the study design; the contacts made with districts and schools and the current status of their assigned schools; and the identification of a sample of students (which differed

depending on the availability of the NAEP sample in each school). Training also covered requesting the transcripts; gathering additional information and materials; identifying a school staff member to respond to the Special Education Student Questionnaires; receiving and clarifying the transcripts and other materials; reporting progress to supervisors; and transmitting materials to Westat. Emphasis was placed on the terminology of special education and the procedures to be used in collecting data related to handicapped students.

4.2 Contacts With States, Districts, and Schools

The original design of the 1987 High School Transcript Study depended on the use of the 1986 NAEP sample of students (and an additional sample of handicapped students), and the NAEP student sample could only be identified by the participating schools. NAEP procedures (also followed in this study) require that student names not leave the school. Therefore, the list that links ID numbers to the names of students sampled for the study remains at the participating school. NAEP usually requests that the schools keep the lists for six months following the assessment period.

When the Transcript Study was being planned by the Department of Education, NAEP staff notified the schools that there would be a further study, asked the schools to maintain their lists for another year, and gave the school a small payment to help cover their added administrative costs. Response to that letter indicated that approximately 60 to 70 percent of the schools still had their lists.

Based on this information and the assumption that more lists would be lost prior to data collection, the National Center for Education Statistics decided to amend the study design. In schools where NAEP sampling lists were available, those students plus additional handicapped students would be included in the study. However, if NAEP lists were not available, a new sample of students would be drawn. A by-product of this decision was that schools sampled for NAEP could be included in the Transcript Study whether or not they had agreed to participate in NAEP, thus increasing the number of schools that were asked to participate in the Transcript Study from 433 to 491.

In early August 1987, a letter from the NAEP project to Chief State School Officers regarding the 1987-88 activities of NAEP included notification of the transcript study as well. In the following weeks, the first letter to school districts affected by both NAEP 1987-88 and the Transcript Study was sent by the NAEP project director, whereas the first letter to districts not in NAEP 1987-88 came from the Westat the Transcript Study project director. A letter of introduction also went to the Catholic dioceses with schools in the sample. Since the study contained a large component of handicapped students, a letter of support for the Transcript Study also went to state and district special education directors from the Department of Education's Office of Special Education Programs. The study information materials sent to states, districts, and schools are included in Appendix A.

4.2.1 Contacting School Districts

After the letters described above had been sent to states and districts, Transcript Study field supervisors contacted each district superintendent to accomplish the following: (1) explain the study and obtain cooperation; (2) obtain names of appropriate contacts at the district and school level; and (3) get an estimate of the number of handicapped and nonhandicapped students eligible for the study in the sampled school(s) in that district.

As shown in Table 4-1, the sampled schools were located in a total of 369 districts. Of these, six districts contained only sample schools that were later found to be "out of scope," having no students eligible for the study. Thus, those districts were classified "out of scope" as well. Of the remaining districts, 346, or 95 percent, gave permission for their schools to participate in the study.

4.2.2 Contacting Schools

Field supervisors contacted each sampled school's principal once permission to do so had been obtained from the district superintendent's office and made arrangements to send to the school an information package about the study (see Appendix A). The supervisor explained the study, obtained the school's cooperation, inquired about procedures for data collection in the school, reminded the principal that the NAEP sampling list would be needed if available, and

Table 4-1. Rates of participation in the 1987 High School Transcript Study

	Number in sample	Out of scope	Non-Participants	Participants	Participation rate *
Districts with sampled schools	396	6	17	346	95.3%
Schools sampled	497**	18	45	433	90.6%
With NAEP List				202	
New List				231	
Students sampled	35,180		1,036	34,140	97.0%
Nonhandicapped students with transcripts requested					
In 202 NAEP List Schools	15,306		474	14,832	96.9%
In 232 New List Schools	12,951		220	12,731	98.3%
Handicapped Students with transcripts requested					
In 202 NAEP List Schools	3,159		117	3,042	96.3%
In 232 New List Schools	3,764		222	3,541	94.0%

*Participation rate = # participations / (# in sample - # out of scope)

**This number includes the 491 schools sampled for 1986 NAEP plus the 6 schools from 1988 NAEP substituted in one large district. The original 10 schools in that district are represented here in the "out of scope" classification.

requested that a course listing or catalogue for the school be sent to Westat as soon as possible. Schools were told that the data collector responsible for the school would call soon to make further arrangements.

Of the 497 sampled schools, 18 were found to be out of scope (having no eligible students). A total of 433 schools, or 90.4 percent of the eligible sampled schools, participated in the study and provided transcripts for sampled students. Of these, transcripts for nonhandicapped students were received from 429 schools (4 had no eligible nonhandicapped students) and transcripts for handicapped students were received from 360 schools (73 had no eligible handicapped students). Most (45) of the schools without eligible handicapped students were private schools. In fact, only one participating private school had an eligible handicapped student.

4.3 Identifying the Sample Students

Data collectors visited each school and identified the sample of students for whom to request transcripts. As discussed above, schools that participated in the 1986 NAEP assessment were asked to retain their NAEP student sample information. Procedures followed in "NAEP List" schools are discussed first, followed by procedures in schools without NAEP materials ("New List" schools).

4.3.1 Schools with NAEP Materials

At schools that provided their NAEP sampled student lists (202 of the 433 participating schools), the data collector first reviewed the retained NAEP materials to make sure that the materials were, in fact, correct and complete. The NAEP materials needed were:

- Student Listing Forms A,B,C -- these are forms on which the eligible students in the school had been listed, prior to their selection for NAEP assessment.
- Administration Schedules -- these listed the students who had been selected for NAEP and indicated which testing session they attended. The school's version of this form contained student names and ID numbers; the version provided to the data collector by Westat did not contain the names but was annotated by Westat to indicate which students were to be selected for the Transcript Study.

- Excluded Student Roster -- these listed the students who had been selected for NAEP but were excluded by the school from assessment (students who were not expected to be able to perform on the assessment in a manner which would reflect their true abilities because of a handicap, limited English proficiency, or reading problems).

The most crucial of these items was the Administration Schedule; if any of the Student Listing Forms or the Excluded Student Roster was missing, the data collector proceeded with the following steps, omitting the portions that required these forms.

In addition, the data collector obtained from the school a list of the eligible handicapped students[1] in the school. All students in the following categories were included in the sample regardless of the type of handicap or its level of severity:

- All handicapped students who were in 11th grade (regardless of age) in the spring of 1986
- All handicapped students who were age 17 (regardless of grade) in 1986 (i.e.; born between October 1, 1968 and September 30, 1969)
- All handicapped students in the above two categories for whom this school was their "home" school but who actually attended classes at a different (off-campus) location

First, the data collector reconstructed the NAEP sample by locating the school's NAEP Administration Schedules (with names) which corresponded to the annotated Administration Schedules provided by Westat (without names but with an indication of which students to select).

Next, it was necessary to "unduplicate" the NAEP student list and handicapped student list. The data collector noted which names were on both lists -- these students would be classified as handicapped and their transcripts would be requested on the list of handicapped students. It was important, however, to keep track of the students' presence on both lists for calculating sampling weights later.

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[1] Handicapped students were defined for this study as those who had had an IEP (Individualized Educational Program) during the 1985-86 school year. An IEP is required for all students receiving federally funded handicapped services.

Transcript Request Forms 1, 2, and 3 were used for listing the names of students for requesting transcripts from the school. These forms were perforated so that the student names could be removed by the data collector before leaving the school. Copies of these and other Transcript Study forms are contained in Appendix B. On all Transcript Request Forms the following information was recorded: exit (graduation) status, sex, ethnicity, birth date, and grade during the 1985-86 school year. If the student had been either a NAEP assessment participant or an excluded student, the student's NAEP ID was recorded (and the demographic information was omitted since it was available from NAEP).

The data collector first listed the handicapped students on Transcript Request Form 2. If a handicapped student's name also appeared on the NAEP Administration Schedule or the Excluded Student Roster, the student's NAEP ID number was recorded on Transcript Request Form 2 as well. Next the data collector listed on Transcript Request Form 1 all nonhandicapped students who had been sampled from the NAEP Administration Schedule. Transcript Request Form 3 was used to list the students who had been excluded from NAEP assessment but whose names were not on the list of handicapped students. The data collector verified the accuracy of the Transcript Request Forms by performing a series of checks across the forms provided.

Copies of the Transcript Request Forms were then given to the school as a means of requesting a copy of the complete high school transcript of each listed student.

4.3.2 Schools Without NAEP Materials

Schools which did not participate in 1986 NAEP, or did participate but could not locate their NAEP student sampling materials (232 schools), were asked to compile a list of students who had been enrolled in the school and in the 11th grade in the spring of 1986. We referred to these schools as "New List" schools. Schools also prepared a separate list of handicapped students enrolled in the school in 1985-86 who were either in the 11th grade, 17 years old, or both.

With these lists in hand, the data collector drew a sample of students from the first list (all 11th graders). For each school the data collector had a Student Sampling Form, which specified the expected number of students on the list and contained a sequence of random

numbers to use to select sample students. Selected students were indicated on the list before the data collector proceeded to the next step. If the number of students on the list did not fall within a specified range around the expected number of students, the data collector called Westat for further instructions.

The data collector next "unduplicated" the sample of students with the list of handicapped students -- students on both lists would be so indicated and their transcripts would be requested as handicapped students.

As was the case with the NAEP List schools discussed above, the data collector listed on Transcript Request Form 2 all handicapped students identified by the school as eligible for the study. Next Transcript Request Form 1 was completed, listing the nonhandicapped students sampled from the list of 11th graders. The data collector then gave these Transcript Request Forms to the school, requesting the transcripts and asking the school to provide for each student: exit (graduation) status, sex, ethnicity, birth date, and grade level during the 1985-86 school year.

4.4 Obtaining Course Catalogues and School Information

When field supervisors initially contacted each school in order to obtain their cooperation, the supervisor requested that a copy of the school's course catalogue (or course list, or whatever was available) be sent to Westat. Because many of these catalogues were thus received at Westat before transcript data collection began, we were able to begin coding the course catalogues right away (see Chapter 5 for a description of the coding process). Any questions the catalogue coders had regarding the catalogues were then referred to the data collectors to pursue. By coding course catalogues, we were able to base coding decisions on course descriptions in addition to course titles.

When the data collector visited a school, he/she requested a copy of the course catalogue if one had not already been sent to Westat. In addition, the data collector made certain that the materials sent to Westat included all courses the students could take, including special education, vocational education, on campus, and off campus courses.

Catalogues were received and coded for 371 of the 433 participating schools. As we eventually learned, these catalogues contained approximately 70 percent of the courses that appeared on the transcripts of the students in those schools.

4.5 Obtaining Transcripts and Student Background Data

When the data collector returned to the school to receive the copies of the sampled students' transcripts, he/she logged them in, assigned an HSTS ID to each student, and made sure all student background data were recorded on the Transcript Request Forms. A pre-numbered ID label was affixed to each transcript, containing the PSU, School, and Student ID numbers. The student's ID number was then written onto the form next to the background information for that student. ID numbers were assigned to each student on the Transcript Request Form, including those for whom no transcript was received.

The data collector reviewed each transcript to make sure the copy was clear and all abbreviations were understandable, making notations if necessary. A form called "Addendum to School Transcript" was provided for recording information that was missing from or unclear on the transcript. Special attention was paid to the transcripts of handicapped students since it was expected that these transcripts might be more difficult to interpret than others. The data collector met with special education staff in the school to be sure that the transcripts were interpretable. For example, it was important to find out which of the courses were mainstream, which were special education sections of regular courses, and which were strictly special education courses.

Once all necessary information had been obtained for a given student (including, if applicable, the Special Education Student Questionnaire, discussed below), the data collector removed the student's name and other identifying information from the transcript and other materials with a dark marker. A complete copy of each Transcript Request Form was left with the school. Before leaving the school for the last time, the data collector removed the student names from all materials that left the school.

Transcripts and the Westat copy of all Transcript Request Forms were then prepared for transmittal to Westat.

Transcripts were requested for a total of 35,180 sampled students; 34,140 transcripts were received and coded, for a 97 percent transcript response rate. The numbers of transcripts requested and received for nonhandicapped and handicapped students within NAEP List and New List schools are shown in Table 4-1.

4.6 Special Education Student Questionnaire

Handicapped students eligible for the study were identified by the school, and their transcripts were requested on Transcript Request Form 2. Prior to receiving the transcripts, the data collector contacted the school's special education director or a special education teacher familiar with these students. Arrangements were made to review the transcripts with this individual and to ask him/her to respond to the Special Education Student Questionnaire for each student.

After the data collector received and labelled the transcript of a handicapped student, a copy of the Special Education Student Questionnaire (with the student's ID affixed) was given to the identified respondent to fill out. A copy of the student's transcript was enclosed in the questionnaire to assist the respondent in recalling the student. Most respondents also consulted their own files in order to complete the questionnaire.

Completed Special Education Student Questionnaires were received and coded for 6,066 of the 6,583 handicapped students for whom transcripts were received. The most common reason for not receiving a completed questionnaire for a student was that no staff currently working at the school were familiar with the student and the records were not complete enough to enable the school to respond. In a small number of cases the school felt it would take too much time to respond to the questionnaire.

4.7 Obtaining Additional School Information

In addition to obtaining course catalogues and student handbooks, field supervisors and data collectors gathered descriptive information about the participating schools during the course of their contacts with them. This information is included in the School File of the project's data files and includes: (1) Class of 1987 graduation requirements (total credits to graduate, nonelective credits to graduate, and required competency exams); (2) alternative diplomas or certificates available; (3) enrollment size; and (4) number of teachers.

Other information about the schools that was available from NAEP and is contained in the School data file includes school type (public, Catholic, other private, Bureau of Indian Affairs); community type (big city, urban fringe, medium city, small place); state; and responses to the NAEP School Characteristics and Policies Questionnaire. Responses to this NAEP questionnaire were available from 425 of the 497 sample schools through NAEP and were gathered from another 23 participating schools during the Transcript Study. Thus, the 1987 High School Transcript Study School Data File contains questionnaire data for 448 sample schools.

4.8 Transmitting Data to Westat

Data collectors reported their progress in data collection to the field supervisors at least once a week, and this information was transmitted from the field supervisors to the Westat home office. Transcripts, questionnaires, and other project materials were transmitted directly to Westat by the data collectors, usually in one batch for each school. Occasionally the transcripts from a school were split into two batches if, for example, it took the school longer to produce the transcripts for handicapped students than for the other students.

5. DATA PROCESSING

Data processing for the 1987 High School Transcript Study took place along three paths simultaneously. Those paths were the Transcript Request Form system (student sampling information), the transcript/catalogue coding system, and the system for coding supplementary questionnaires (for schools and handicapped students).

The steps within each of the three paths, depicted in Figures 5-1 through 5-3 and described in detail below, involved the following: receiving the data from the field and dividing the forms into three segments for each school (transcript request forms, catalogues/transcripts, and questionnaires); entering data from the transcript request form and later reconciling that information with transcript, questionnaire, and NAEP information; coding the transcripts, which involved the substeps of coding and keying the course catalogues, preparing and keying the transcripts, merging the catalogue and transcript data from a school in order to code the transcripts (Computer Assisted Coding and Editing system), and reviewing and finalizing the coded transcripts; and coding the questionnaires.

5.1 Receipt of Data from Data Collectors

The total package of data for a sampled school included the following pieces: Transcript Request Forms; Student Listing Forms; student transcripts; Special Education Student Questionnaires; the School Characteristics and Policies Questionnaire (if it was not obtained during 1986 NAEP); the Summary of School Information form; the Project Checklist; and a Shipping Transmittal Form. When a school data package was received from a data collector, the package was checked to be sure the pieces listed above were present and completed. If any portion was incomplete, the data collection supervisor telephoned the data collector to remedy the problem. All information received was noted in the automated receipt log for the project. This log also kept track of the various forms for each school as they were coded, keyed, and edited.

FIGURE 5-1. PROCESSING THE STUDENT SAMPLING INFORMATION

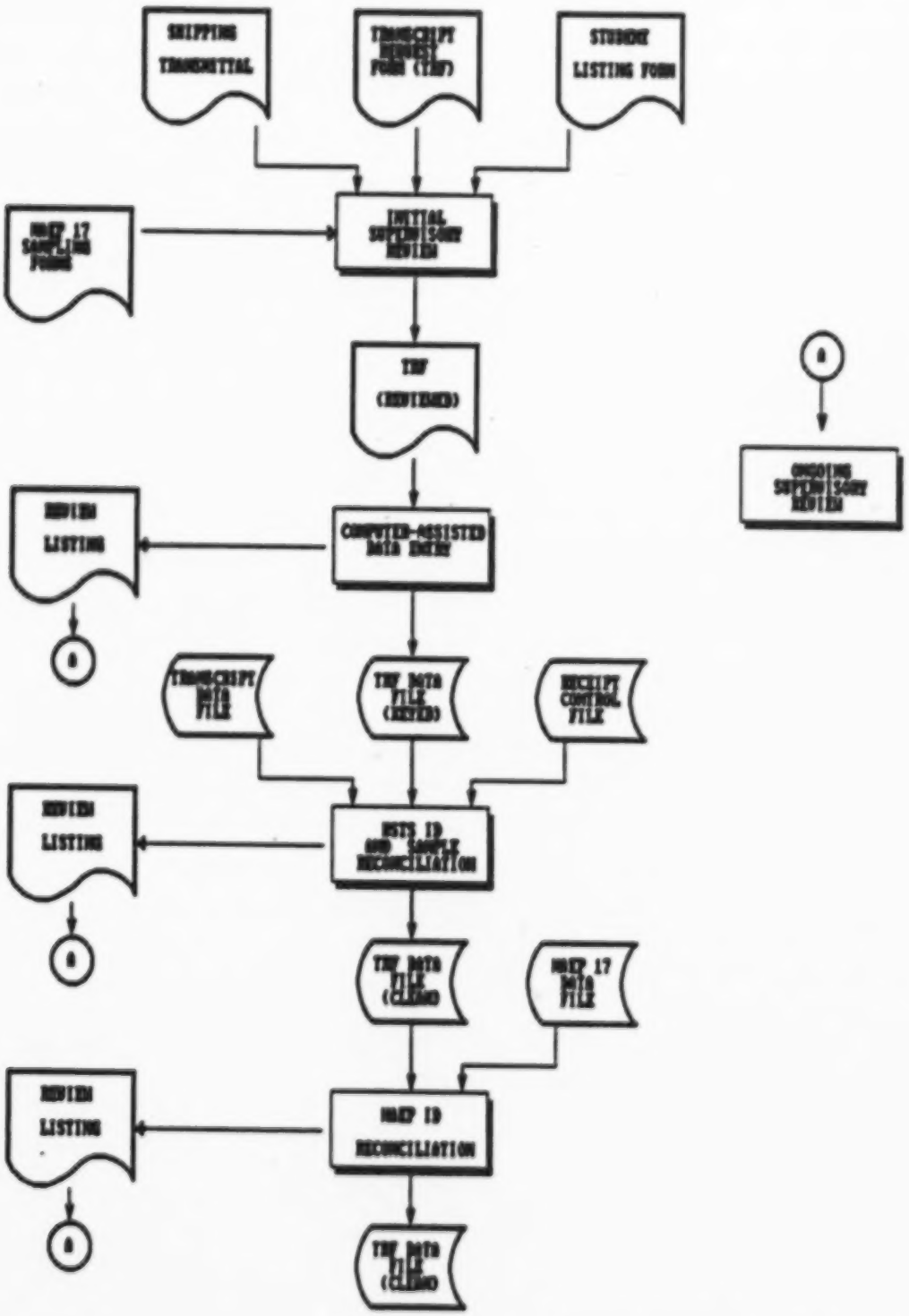


FIGURE 5-2. PROCESSING TRANSCRIPTS AND COURSE CATALOGS

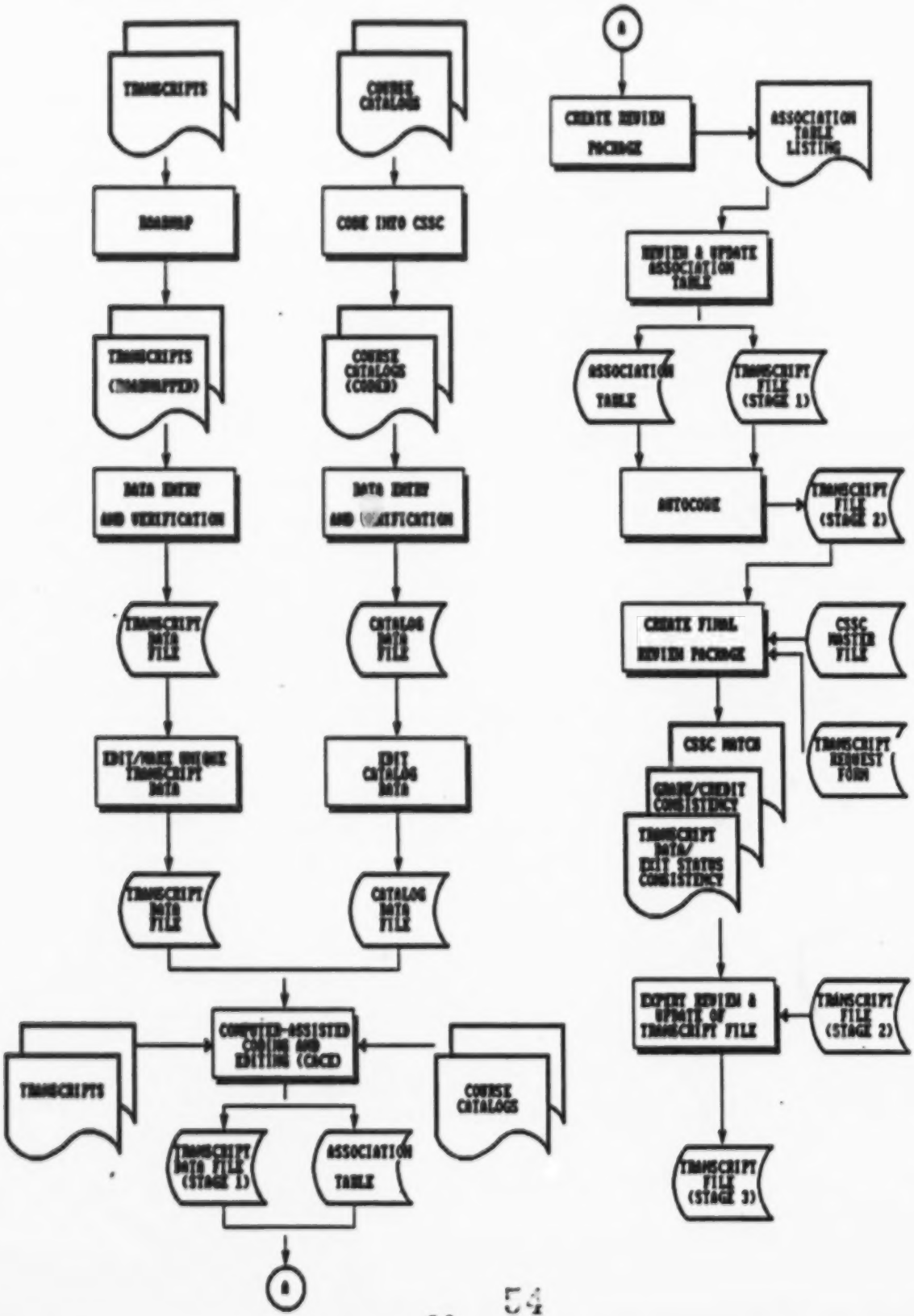
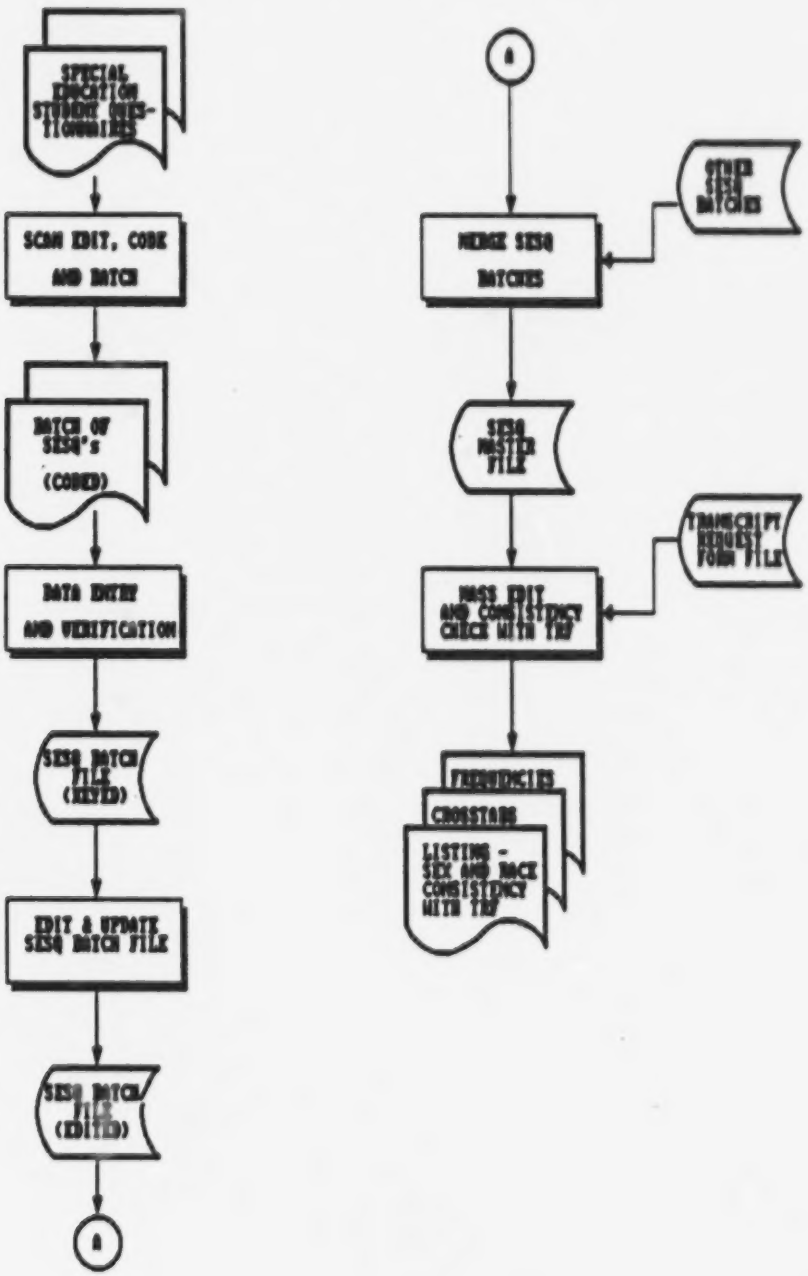


FIGURE 5-3. PROCESSING QUESTIONNAIRES



5.2 Processing the Student Sampling Information

The Transcript Request Forms, the Student Listing Forms, and the Shipping Transmittal Form for each school provided the data for the student sampling information. Since sampled students were identified by the data collector at the school, Westat had no advance knowledge of sample members. Therefore, the sample file had to be developed after data receipt. The primary source for this data file was the Transcript Request Forms. These were checked by the data collection supervisors against the Student Listing Forms and the Shipping Transmittal Form. For NAEP-list schools the supervisors also consulted the NAEP sampling forms (administration schedules).

As noted in the data collection section of this report, all student names were removed from the materials before leaving the school. This meant that all information had to be carefully linked with the Transcript Study (HSTS) student ID. It also meant that the sampling could be reviewed from a procedural point of view only.

Once reviewed by the supervisors, the Transcript Request Forms for each school were sent to data entry. That data file then underwent three levels of review: the (1) Transcript Request Form internal consistency and range checks; (2) HSTS ID reconciliation across multiple data files; and (3) NAEP ID reconciliation between Transcript Request Forms and 1986 NAEP.

The first review consisted of an edit program that checked the internal ranges and consistency of keyed Transcript Request Form data (HSTS Student ID, NAEP student ID or NAEP excluded student ID (if appropriate), exit status, race, grade, sex, and date of birth). The edit program was run on a school by school basis as the forms for each school were received and keyed. At this stage, the sampling done within the school was also reviewed to ensure that it had been done correctly.

The second review, referred to as the ID reconciliation compares the HSTS IDs contained in these three files:

1 - Transcript Request Forms that had been through the first review and had been made into data files

2 - Transcript data that had been coded and made into data files

3 - Student-level receipt control file (receipt of transcript for each student).

The third level review was the NAEP ID reconciliation. This involved only those schools that were NAEP-linked (i.e., schools where the 1986 NAEP sample was available for use in the Transcript Study). The edit program for this review compared the NAEP IDs listed on Transcript Request Forms from NAEP-linked schools with actual 1986 NAEP IDs in the NAEP data files.

Either of the two later reviews could have an impact on the first Transcript Request Form review. That is, the keyed Transcript Request Form data previously checked and keyed may, as a result of the further ID reconciliations, have required some adding, deleting, or modifying of records. The nature of the errors found and corrected at this stage is discussed in Section 3.2.3 above.

Once the above reviews were completed and all appropriate corrections were made, the Transcript Request Form data files and any sampling notes regarding a particular school were given to the project statisticians for review.

5.3 Processing Transcripts and Course Catalogues

5.3.1 Course Catalogues

The first step in processing transcripts was the coding of course catalogues. These catalogues or course listings were requested from participating schools prior to on-site data collection. Therefore, most catalogues were received prior to the arrival of the transcripts from the school. Expert coders reviewed each catalogue, and based on course descriptions and other explanatory information from the school, a seven-digit code was assigned to each course as follows: the first six digits represented the CSSC[1] code (as revised during the study, see Appendix D); and the seventh digit was used to distinguish regular and special education classes, as follows:

1 = regular section of a regular (mainstream) course

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[1]Ludwig, M.J., L. Olivetti, N. Sandberg, and B. Waite. *A Classification of Secondary School Courses.* Alexandria, Evaluation Technologies Incorporated, July 1982.

2 = special education section of a regular course (restricted to special education students), or a special education resource class (e.g., Resource Math)

0 = special education course at the "functional" level

Five additional variables were coded for each course in the catalogue:

(1) Location of the course: on campus, off campus at a vocational/technical center, off campus at a special education center, off campus at another location, and a combination of the above.

(2) Language in which the course is taught: English, or other than English.

(3) Level of the course: remedial or other.

(4) Level of the course: Honors/Gifted/Advanced Placement or other.

(5) Combination course: the course is a combination of two or more subjects, each of which corresponds to a CSSC code. This flag was used to signal to the coder at a later stage that the course, credit, and grade should be split into two or more course records.

Once codes had been assigned to each course in a catalogue, the information was keyed into a data file. A further review and edit of this file occurred as follows. First, a printout was produced that contained, for each course, the course title in the catalogue, the seven-digit code assigned, and the standard course titles corresponding to the assigned CSSC code (obtained from the master CSSC file). The catalogue coding supervisor reviewed each printout, corrected the errors, and returned the printout to data entry.

The resulting course catalogue data file for each school was used in the Computer Assisted Coding and Editing (CACE) process discussed below. In addition, the combined catalogue files appear on the project data tape as the Course Offerings File. It should be noted that the Course Offerings File contains only those courses that were listed in course catalogues. It does not contain courses from schools from which we did not receive a catalogue, nor additional course titles that occurred on transcripts for the schools from which we did receive catalogues. Therefore, the Course Offerings File is <u>not</u> intended to be a complete listing of courses offered. This file was created merely as a by-product of the transcript coding process and is included in the project data files as a convenience to the user. If the user desires a complete listing of all courses on the transcripts this can be extracted from the Transcript File.

5.3.2 Preparing (Roadmapping) and Keying a School's Transcripts

The formats used by schools for the presention of information on their students' transcripts vary considerably across states, districts, and often even across schools within a district. Therefore, before a batch of transcripts could go to data entry, a variable layout, or road map, had to be devised for the transcripts' particular format. We refer to this process of preparing transcripts for data entry as "roadmapping."

First, a copy was made of one transcript in the batch to be used as a guide. The variables to be keyed for the transcripts were located, circled, and numbered to correspond with the keying format. Those variables included: the HSTS student ID (always on a label affixed to the reverse of the transcript); course title, course number or code if used by the school, grade received, credits received, school year or grade level in which the course was taken, and additional notations or codes attached to the course. If a student's name or any identifying information had not already been removed from the transcript, the data editor did so at this point.

In addition, each transcript was reviewed and edited for clarity. Some schools' transcripts contained courses for each of four grading periods, others had courses for each of two semesters, while still others had courses recorded once a year. If a single course title appeared under multiple periods of the same school year, the editor indicated that it should only be keyed once, combined the credits for all periods, and recorded the last grade received.

Once the road map was prepared and the transcripts reviewed and edited, the map and batch of transcripts were submitted to data entry. Transcript data entry was subject to 100 percent verification.

5.3.3 Loading Catalog and Transcript Files into the Computer Assisted Coding and Editing System

When the catalogue and transcript files for a particular school had been keyed, a final edit check was run on each to ensure that all required information was present and within acceptable ranges. The edit check for the catalogue was described in Section 5.2 above. The edit check for transcripts included: a count of the number of course records present, the number of course records without grades, and the number of course records with zero credits. The transcript

file underwent an additional automated step: any course title that occurred more than once on a transcript (the repeat must be identical), automatically received an additional set of codes -- letters appended to the title in order to distinguish the course records. (We called this "unique-ing" the file.) After reviewing the edit printouts, the coding supervisor loaded the catalogue and transcript files for a school into the Computer Assisted Coding and Editing (CACE) system and notified the CACE coders that the school's transcripts were ready for coding.

5.3.4 CACE Coding and Autocoding

The following is a description of the way the Computer Assisted Coding and Editing (CACE) system functioned for this study. In order to code the transcripts for a school, the CACE coder logged onto the CACE computer terminal and requested the files for the school by ID. With the paper versions of the transcripts and catalogue for the school in front of him/her, the CACE coder requested the transcript of the first student in that school by ID. The terminal screen then showed the transcript of the student, with the first course highlighted. Another portion of the screen showed the school's course catalogue file, in which the course titles appeared in alphabetical order. The coder searched the catalogue file for the title of the first course on the transcript. When a match was found, the coder pressed a function key, which caused CACE to attach the CSSC code for the course in the catalogue to the course title on the transcript. This "attachment" was accomplished through the creation of an "association table" for the school, which continued to grow as more courses were matched from transcript to catalogue. Once a course title was matched to a CSSC code, the CACE system automatically made the same association for every occurrence of the identical course title on that and other transcripts in the same school.

When the coder chose the code for each course he/she took into consideration the grade level or year in which the course was taken. For example, the school's catalogue may have listed "English 9, English 10, English 11, and English 12." The transcript might simply have listed "English," once under grade 9 and once under grade 11. (These would have been distinguished by the "unique-ing program" and would read "English 1A (1 for grade level 9 and A for the first occurrence of the course title) and "English 3B" (3 for grade level 11 and B for the second occurrence)). The coder associated each occurrence of the title "English" on the transcript with the correct grade level course in the catalogue.

If the coder could find no match for a course title on the transcript, a special code ("9901") was temporarily assigned to indicate to coding reviewers that a code needed to be assigned to this course by the expert catalogue coders.

The CACE coder continued until all the courses on the first transcript were completed. As one transcript was completed, the coder saved the codes into the association table. This association table was read by the CACE system as another transcript from the same school was brought onto the screen. The association table then automatically coded (autocoded) all repetitions of the course titles from the first transcript. The coder needed only to code the remaining courses on the transcript and on all remaining transcripts.

Once all transcripts in a school file had been completed, the coder printed out a copy of the association table and checked it over for any mistakes he/she might have made. Corrections could be made to the association table, and the school's file of transcripts were then re-associated with the new association table, correcting all transcripts automatically.

The autocoding process in the CACE system for the Transcript Study was driven by the association table, which was created during the coding sessions. The coder used the course list to code courses on the transcripts. Once a match was made between a course on a transcript and a course in the catalogue for a particular school, that match was recorded into the association table for that school. From that point on, every course in the transcripts from that school which exactly matched the course title in the association table automatically was assigned the CSSC code associated with that title. The more courses one coded for a school, the larger the association table, and the more courses that would be autocoded by the system. When a new transcript was brought up by the coder, the system automatically searchee the association table for the school looking for matches before displaying the remaining, uncoded courses from the transcript. This means that the coder was faced with only those courses which have not already been coded for the school.

The coder could invoke the Autocode option from the system menu to autocode the entire school using the association table. This feature was used in those cases when a review of the coding for the school revealed some incorrect associations. Corrections were then made to the association table directly and the school would be autocoded, thus correcting all instances of that course in the school's transcripts.

5.3.5 Coding Remaining Courses

When the CACE coder completed all transcripts for a school, a printout was produced containing the association table and all course titles with a code of "9901," meaning that the coder could not find a match for it in the course catalogue. This listing and all school materials were then returned to the expert course coders to review and to assign CSSC codes.

The expert coders completed the following steps: (1) reviewed the association table for errors in matching codes to course titles and made corrections as needed; (2) entered codes for all transcript entries left uncoded ("9901"); and (3) called the school to resolve questions about course content, if necessary. These corrections and additions were then added to the school's association table, and the autocoding program was run once more.

5.3.6 Coding Credits and Grades

At transcript data entry, the credits were keyed as they appeared on the transcripts. In the final phase of coding the transcripts, credits were standardized to approximate the Carnegie unit.[2] Many schools use credits units on another scale (e.g., equal to 2, 5, or 10 times a Carnegie unit), and these were standardized to represent one Carnegie unit.

Other coding decisions made with regard to credits were as follows:

> If a credit had been omitted, apparently by accident (i.e., a passing grade was received and other occurrences of the same course in the same school received credit), credit was assigned equivalent to other occurrences of the course in the school.
>
> If a school aggregated credits across all four school years, these were split to represent each course, each year.
>
> If a unit of credit appeared to be erroneous (e.g., all other credits in the school were .5 or 1.0 but one course received 50 credits), we adjusted the credit to an amount consistent with other, similar courses in the school.

---

[2] A Carnegie Unit is equivalent to 200 class minutes per week (275 for laboratory classes) for 36 weeks. Since we did not have information regarding the exact length of class periods or the school year in individual schools, we used an approximate unit: one course taken for one period each day for the complete school year.

Grades were recorded in the data files in the same form as they appeared on the transcripts. In addition, grades were transformed into a standard scale; both the original and rescaled values appear in the Transcript Data File.

5.3.7 Reviewing and Finalizing the Transcript Coding

A final CSSC review for transcript course coding was performed by the expert catalogue coders. The review consisted of careful scanning of the printout of all unique course titles in a given school's data set and ensuring that each was coded correctly. Factors of concern in this final review phase included: (1) making sure every course on the transcript appeared in the data file; (2) checking the accuracy and consistency of CSSC code assignments within the context of the school course catalogue and within Westat's coding conventions; (3) reviewing tracking conventions within that school and assuring that levels of instruction in basic academic areas were accurately reflected in the codes assigned; (4) checking all vocational/technical courses to make sure that advanced levels were captured even though the course titles may not have included level designators; (5) ensuring that special education courses were properly coded and designated; (6) calling the school to resolve any unanswered coding questions or confusion (this often involved requesting additional information regarding courses taken off campus); (7) documenting any necessary course catalogue corrections; and (8) providing instructions for correcting codes and for splitting combination courses.

5.4 Processing Supplementary Questionnaires

Two questionnaires were gathered in the Transcript Study, the School Characteristics and Policies Questionnaire, and the Special Education Student Questionnaire. The School Questionnaire had been used in 1986 NAEP and was already available for 425 of the 491 sampled schools. (The remainder had either not participated in NAEP or had failed to respond to the questionnaire). We gathered an additional 23 School Questionnaires during the Transcript Study. Coding was completed following the same specifications used in 1986 NAEP. Item nonresponse on the School Questionnaire ranged from about 10 percent to 20 percent of the schools.

Special Education Student Questionnaires were obtained from the student's school for handicapped students; a copy of the questionnaire is contained in Appendix B. These questionnaires were scan edited, coded, batached, and sent to data entry.

Special Education Student Questionnaires were obtained for 6,064 handicapped students. School special education staff responded to the questionnaires and were often unable to provide answers to some of the items. Item nonresponse ranged from a low of 1.2 percent (for student gender) to a high of 9.8 percent (for the number of class periods spent in specific settings.)

Most items of the Special Education Student Questionnaire were coded exactly as they appear. The following coding rules were used for items 5, 6, and 8:

Item 5. For purposes of P.L. 94-142 reporting, what is this student's primary disability?

If the respondent circled more than one handicapping condition, the coding rule was: Autism took priority over any other condition; deaf or blind took second priority to any other condition.

If the respondent responded with a term other than those listed, the appropriate category was selected. That is,

Seriously emotionally disturbed includes: emotionally disturbed, behavior disordered, hospitalized in psychiatric unit.

Orthopedically impaired includes: cerebral palsy, juvenile rheumatoid arthritis.

Learning disabled includes: slow learner.

Other health impaired includes: hemophilia, heart problems, tuberculosis, muscular dystrophy.

Item 6. Excluding lunch, how many periods of the school day did this student spend in the following settings in 1986-87?

The response categories ranged from 0 to 8 periods in the school day. If a response greater than 8 was written into any of the four response lines, all responses were divided by 2; the purpose was to calculate proportion of the day in each setting so absolute values were not important.

Responses of "less than one" were recoded to "one."

If all four response lines were blank, we coded all four as missing. If any response or combination of responses totaled three or more class periods, we coded the remaining blank items as "0" rather than missing.

Item 8. Did this student receive any of the following related services in 1986-87?

If all four response categories were blank, all four were coded as missing. If any response was given as "yes," missing responses were coded as "no" rather than missing.

In the data entry process, the questionnaires were subject to 100 percent verification. When returned from data entry, each batch of data was edited according to range and logic criteria. After a batch was declared clean, it was merged into the master file, on which frequencies and crosstabulations were run to further check the data. In addition, the sex and race characteristics reported on the questionnaire were compared with those reported on the Transcript Request Forms and any discrepancies were researched and resolved.

6. WEIGHTING PROCEDURES AND VARIANCE ESTIMATION

6.1 Base Weights

The base weight assigned to a sampled student transcript is the reciprocal of the student's probability of selection. That probability is the product of three factors:

(1) The probability that the PSU was selected;

(2) The conditional probability, given the PSU, that the school was selected for the 1986 NAEP spiral assessment;

(3) The conditional probability, given the school, that the student was selected for the Transcript Study.

Thus, the base weight for a student may be expressed as the product

$$W = W_1 \cdot W_2 \cdot W_3$$

where

W_1 = PSU weight;

W_2 = spiral-allocated school weight, conditional on the PSU;

W_3 = student weight, conditional on the individual school.

The PSU weight, W_1, is the reciprocal of the probability of selection for the PSU. In the 94 PSU sample, 34 large PSUs were selected with certainty and have a PSU weight of 1.0. The remaining 60 PSUs were selected using a one PSU per stratum design with probabilities proportional to 1980 population.

The spiral-allocated school weight, W_2, is the reciprocal of the probability of selection of the school for spiral assessment, conditional on the PSU. Schools selected for 1986 NAEP were asked to participate in the transcript study whether or not they had cooperated in the 1986 NAEP assessment. For schools which had dropped out of the NAEP sample prior to session allocation, W_2 is simply the inverse of the school selection probability (before session allocation), conditional on the PSU.

In schools that retained their NAEP sampling materials, the within-school student transcript weight, W_3, reflects the specifics of the Transcript Study sampling procedures as well as those underlying the selection of the 1986 NAEP student sample. Overriding the discussion that follows is the fact that grade-and/or-age-eligible students identified by their schools as handicapped were sampled with certainty, and for these students W_3 is always set equal to 1.

Let the within-school probabilities of student sample selection for 1986 NAEP be denoted as follows:

Student Listing Form type	Assessment type		
	Spiral	Tape	Language Minority
A	P_{SA}	P_{TA}	P_{LA}
B	P_{SB}	P_{TB}	P_{LB}
C	P_{SC}	P_{TC}	P_{LC}

Let also the number of tape assessments conducted in a school be denoted by n_t.

Taking account of the exclusion of Foundations of Literacy assessed students and the subsampling of absent and non-grade-11 assessed students, the within-school base selection student transcript probabilities in schools retaining their NAEP sampling materials are given by:

Subgroup	Student Listing Form	Probability
Assessed, grade 11 (spiral or language minority)	A	$.75P_{SA} + P_{LA}$
	B	$.75P_{SB} + P_{LB}$
	C	$.75P_{SC}$
Assessed, not in grade 11 (spiral or language minority)	A	$(.25)(.75P_{SA} + P_{LA})$
	B	$(.25)(.75P_{SB} + P_{LB})$
	C	$(.25)(.75P_{SC})$
Absent (spiral or language minority)	A	$(.25)(P_{SA} + P_{LA})$
	B	$(.25)(P_{SB} + P_{LB})$
	C	$.25P_{SC}$
Excluded, age 17 (spiral, tape or language minority)	A	$P_{SA} + n_t P_{TA} + P_{LA}$
	B	$P_{SB} + n_t P_{TB} + P_{LB}$
	C	$P_{SC} + n_t P_{TC}$
Excluded, not age 17 (spiral or LM)	A	$P_{SA} + P_{LA}$
	B	$P_{SB} + P_{LB}$
	C	P_{SC}

and W_3 is the inverse of the probabilities detailed above.

For schools that did not participate in 1986 NAEP or had lost their NAEP student sampling materials, the probability of selection of nonhandicapped student transcripts is as follows:

Subgroup	Probability
Grade 11	1, if GRE < 81 75/GRE, if GRE ≥ 81

where GRE is a QED estimate of grade 11 student enrollment. Grade-and/or-age-eligible handicapped students were sampled with certainty, and for these students W_3 is always set equal to 1. Otherwise, W_3 is the inverse of the probability detailed above.

6.2 Adjustments to Base Weights for Nonresponse

The base weight for a student was adjusted by three nonresponse factors: one to adjust for school noncooperation, the second to adjust for the fact that in certain schools non-handicapped students were sampled only if they were in grade 11, and the third to adjust for transcripts that were requested but were not obtained, or if obtained, were not codable. Thus, the nonresponse adjusted weight for a student was of the form:

$$W' = W_1 \cdot W_2 \cdot f_2 \cdot W_3 \cdot f_3 \cdot f_4$$

where the nonresponse adjustment factors, f_2, f_3, and f_4 were computed when appropriate, as described below.

6.2.1 School Nonresponse Adjustment

This adjustment (f_2 above) was intended to compensate for school noncooperation. Adjustment factors were computed for the full sample (and separately by jackknife replicate), for each of sixty adjustment classes of schools specially defined for this purpose. Adjustment classes were formed by grouping PSUs within cells defined by the main stratification variables for the 1986 NAEP PSU sample: SMSA status, high minority status and region. When possible, more than one adjustment class was constructed within these cells, using the rule of thumb that an adjustment class should contain a minimum of five cooperating schools.

For any school nonresponse class "n_2", the school nonresponse adjustment factor, f_{2n_2}, was given by

$$f_{2n_2} = \frac{\sum_{i \in A_{n_2}} W_{1i} \cdot W_{2i} \cdot G_i}{\sum_{i \in B_{n_2}} W_{1i} \cdot W_{2i} \cdot G_i}$$

where

G_i = the estimated number of grade-and/or-age-eligible students in school "i" based on QED data;

set A_{n2} consists of the **original** 1986 NAEP spiral-allocated sample of schools (cooperating and noncooperating schools, but not substitutes);

and

set B_{n2} consists of all schools cooperating in the Transcript Study (including schools that were substituted for 1986 NAEP noncooperating schools).

Note that, for a substitute school, W_{2i} was defined as the school weight of the originally-selected school for which it was a substitute.

6.2.2 Student Nonresponse Adjustment for Undercoverage of Nonhandicapped/ Non-grade 11 Students

This adjustment (f_3 above) was intended to compensate for the fact that in schools which were not participants in 1986 NAEP, or which having participated, had disposed of their NAEP sampling materials before being visited by a Transcript Study data collector, nonhandicapped students were sampled only if they were in grade 11. Adjustment factors were computed for the full sample (and separately by jackknife replicate), for each of thirty-one adjustment classes of students specially defined for this purpose. The classes were formed based on the same considerations described in the preceding section with the additional restriction that an adjustment class should contain a minimum of five schools that had participated in 1986 NAEP and had not disposed of their NAEP sampling materials.

For any nonresponse class "n_3", the student nonresponse adjustment factor for undercoverage of nonhandicapped/non-grade 11 students, f_{3n_3}, was given by

$$f_{3n_3} = \frac{\sum_{i \in A_{n_3}} W_{1i} \cdot W_{2i} \cdot f_{2i} \cdot A_i}{\sum_{i \in B_{n_3}} W_{1i} \cdot W_{2i} \cdot f_{2i} \cdot A_i}$$

where

A_i = the estimated number of students in school "i" eligible by age alone, based on Principal Questionnaire data (if available);

set A_{n_3} consists of all Transcript Study cooperating schools in adjustment class "n_3";

and

set B_{n_3} consists of all cooperating schools in adjustment class "n_3" in which 1986 NAEP sampling materials were used to draw the student transcript sample.

The factor f_3 as computed above is applied only to the weight of students who

(i) Were sampled in schools in which 1986 NAEP student sampling materials were used to select the transcript sample;

(ii) Were not sampled as handicapped students; and

(iii) Were not in grade 11 in academic year 1985-86.

For all other students, $f_3 = 1$.

6.2.3 Student Nonresponse Adjustment for Missing or Uncodable Transcripts

Not all requests for transcripts in cooperating schools were honored, and not all transcripts provided by schools proved to be codable. A separate weight adjustment (f_4) was developed to reduce the bias associated with this type of nonresponse. Adjustment classes were constructed for four distinct groups of students: handicapped students; nonhandicapped students who were nonetheless excluded from 1986 NAEP assessment; other NAEP-sampled students; and nonhandicapped students in schools where 1986 NAEP sampling materials were not used to select the Transcript Study student sample. Adjustments were made separately by PSU for each of these groups, except for the excluded students, for whom adjustments were made by region because of the sparseness of data. Adjustment factors were computed for the full sample (and separately by jackknife replicate), within each of the specified classes.

For any nonresponse class "n_4", the student nonresponse adjustment factor for missing or uncodable transcripts, $f4_{n_4}$, was given by

$$f_{4n_4} = \frac{\sum_{j \in A_{n_4}} W_{1j} \cdot W_{2j} \cdot f_{2j} \cdot W_{3j} \cdot f_{3j}}{\sum_{j \in B_{n_4}} W_{1j} \cdot W_{2j} \cdot f_{2j} \cdot W_{3j} \cdot f_{3j}}$$

where

Set A_{n4} consists of the students in adjustment class "n_4" for whom a transcript request was made;

and

Set B_{n4} consists of the students in adjustment class "n_4" for whom a usable transcript was coded.

6.3 Variation in Weights

A general goal of the 1986 NAEP student sample design was uniform overall sampling fractions except for planned oversampling in certain types of areas or schools to improve estimates for certain subgroups. However, additional variation in weights was caused by a number of factors. Variation arose from the undersampling, by a factor of four, of schools with less than seven expected eligibles. Variation also arose from the use of the same PSU's for each age class, with selection probabilities proportionate to average measures of size, and the subsequent adjustment of the expected sample of students from an age class to approximate the desired number. Furthermore, the noncooperation of some schools for which substitutions were not made resulted in the raising of the sampling fraction in cooperating schools. Sampling procedures specific to the Transcript Study introduced still more variability, resulting from the use of differential sampling rates for handicapped students, students not in grade 11 and students absent from 1986 NAEP assessment. Finally, adjustment for nonresponse at the school and student levels added to the variation in weights.

Such variability in weights contributed to the variance of overall estimates from the survey by approximately a factor of $F = 1+V^2$, where V^2 denotes the relvariance of the student weights. For the Transcript Study, F = 2.72, before trimming and poststratification.

By design, the use of poststratification factors to be discussed in Section 6.5 also added to weight variation. However, poststratification presumably reduced the variance of overall estimates by reducing the variability in the contribution to the overall estimates of subclasses whose transcripts differ.

6.4 Trimming the Weights for Outliers

The students in some schools were assigned extremely large weights because the school was predicted (on the basis of QED data) to have a small number of eligible students, yet in fact had a large number. Other excessively large weights may have been the result of extreme levels of nonresponse. To reduce the effect of large contributions to variance from a small set of sample schools, the weights of such schools were reduced, i.e., trimmed. The trimming procedure introduces a bias but is expected to reduce the mean square error of sample estimates.

The trimming algorithm was identical to that used in 1986 NAEP and had the effect, approximately, of trimming the weight of any school that contributed more than a specified proportion, q, to the estimated variance of the estimated number of students eligible for sampling in the Transcript Study.

Let

M = number of schools participating in the Transcript Study;

W_i = weight assigned to school "i" (i.e., the product of the PSU weight, the school weight, the school nonresponse factor;

x_i' = estimated number of transcript study eligible students in school "i" (i.e., the sum of the within-school weights, adjusted for nonresponse, for the student transcripts);

x_i'' = $W_i x_i'$; and

$$\bar{x}'' = (1/M) \sum_{i=1}^{M} x_i'' .$$

A rough approximation to the variance of $\bar{x}''$ is

$$\frac{1}{M} \sum_i (x_i'' - \bar{x}'')^2 .$$

We adopted a trimming method that reduced the weight W_i for a small number of schools in such a manner that no school makes a contribution to the sum shown above that is greater than a specified proportion q. That is, for any school "j", the weight W_j, after all weights have been trimmed if required, satisfies the condition

$$(x_j'' - \bar{x}'')^2 \leq \theta_i \Sigma (x_i'' - \bar{x}'')^2 .$$

The weight is not to be altered if $x_j'' < \bar{x}''$. Hence the condition is equivalent to

$$x_j'' - \bar{x}'' \leq \sqrt{\theta_i \Sigma (x_i'' - \bar{x}'')^2}$$

or

$$W_j \leq \frac{1}{x_j''} \left[\bar{x}'' + \sqrt{\theta_i \Sigma (x_i'' - \bar{x}'')^2} \right] .$$

The trimming was done iteratively. Using the initial weights, the weight for each school which failed to satisfy the inequality was reduced to the value given by the right-hand side of the inequality. Using the weights as trimmed, the procedure was iterated.

The value of θ to be used was chosen by judgement to provide negligible bias while substantially reducing variance. The chosen value of θ was 10/M, which resulted in a trimming of the weights for seven schools.

The iteration proceeded as follows. In each school "i", define

$$\theta_i = \frac{(x_i'' - \bar{x}'')^2}{V}$$

where

$$V = \sum_i (x_i'' - \bar{x}'')^2 .$$

The initial candidate schools for trimming were those for which $\theta_i > 10/M$. We began with school "j", which has the maximum value θ_j, and obtained values of the variables for the k-th iterate as follows:

$$W_j(k+1) = W_j(k)\left[\frac{\bar{x}''(k)}{x_j''(k)} + \sqrt{\frac{10/M}{\theta_j(k)}}\left|1 - \frac{\bar{x}''(k)}{x_j''(k)}\right|\right]$$

$$\bar{x}''(k+1) = \bar{x}''(k) + \left[W_j(k+1) - W_j(k)\right] x_j'(k)/M$$

$$\bar{x}'(k+1) = W_j(k+1)\, x_j'(k)$$

$$V(k+1) = \left[x_j'(k+1)\right]^2 - \left[x_j'(k)\right]^2 - M([\bar{x}'(k+1)]^2 - [\bar{x}'(k)]^2) + V(k)$$

$$\theta_j(k+1) = \left[x_j'(k+1) - \bar{x}'(k+1)\right]^2 / V(k+1)$$

$$x_j'(k+1) = x_j'(k) .$$

Iteration proceeded until convergence to five significant figures.

For the next school whose weight was to be trimmed, $\bar{x}''$ and V were replaced by the values attained in the iteration for the previous school, and then iteration proceeded as above. After all necessary weights were trimmed in an iteration, the process was repeated if the weight for any school violated the condition.

6.5 Poststratification

The weights determined in the manner described in the preceding sections were adjusted by poststratification in order to reduce the sampling error of estimates relating to student populations that span several subgroups of the total population. The poststratification was carried out following a procedure identical to that used in 1986 NAEP. Basically, the poststratification modified the weights of the sample students in such a way that resulting estimates of the total number of students in the specified subgroups of the population were the same as the presumably "better" estimates that were made for each of these subgroups. The "better" estimates were composite estimates based on 1983 and 1984 CPS estimates, 1985 population projections, and the 1986 NAEP subgroup estimates.

For poststratification purposes, 13 subgroups were defined in terms of race, ethnicity, census region,[1] and sampling description of community (SDOC)[2] as follows:

Subgroup	Race	Ethnicity	Region	SDOC
1	White	Non-Hispanic	1	1, 2
2	White	Non-Hispanic	1	3, 4, 5
3	White	Non-Hispanic	2, 3	1, 2
4	White	Non-Hispanic	2, 3	3
5	White	Non-Hispanic	2, 3	4,5
6	White	Non-Hispanic	4	1, 2
7	White	Non-Hispanic	4	3, 4, 5
8	All races	Hispanic	1, 2, 3	All
9	All races	Hispanic	4	All
10	Black	Non-Hispanic	1	All
11	Black	Non-Hispanic	2	All
12	Black	Non-Hispanic	3, 4	All
13	Other	Non-Hispanic	1, 2, 3, 4	All

[1] Geographic regions used by the Office of Business Economics, Department of Commerce. These regions differ somewhat in definition from the four regions defined by the U.S. Census Bureau description in Chapter 5. Region 1 corresponds to the Northeast region, plus Delaware, Maryland, and the District of Columbia. Region 2 corresponds to the South region, minus the above three states and Oklahoma and Texas. These two states are included in Region 4, which also contains all states from the West region. Region 3 corresponds to the North Central region.

[2] SDOC (Sampling Description of Community) is defined in Appendix E.

Each of the 13 subgroups was further divided into three subclasses:

(a) Students eligible by **both age and grade;**

(b) Students eligible by **age only**; and

(c) Students eligible by **grade only.**

This resulted in 39 poststratification cells. For each cell, the poststratification factor is a ratio whose denominator is the sum of the weights (after adjustments for nonresponse and "trimming") associated with codable transcripts, and whose numerator is an adjusted estimate, based on more reliable data, of the total number of students in the cell.

6.5.1 Development of Adjusted Cell Estimates to be Used in Poststratification

The Bureau of the Census provided special tabulations of the Current Population Survey (CPS) conducted in October, 1983, and October, 1984. These tabulations gave estimates of the population by race, ethnicity, Sampling Description of Community, Census region, age and school enrollment by grade. For each cell, a number of estimates were developed from the available data and averaged in order to reduce sampling errors. For each of the 39 poststratification cells, six statistics were derived from the tabulations and denoted, respectively, by

$$N_{8,83},\ N_{9,83},\ N_{10,83},\ N_{9,84},\ N_{10,84},\ N_{11,84}.$$

Here, $N_{j,y}$ denotes the CPS estimate of the number of students enrolled in grade j and the corresponding age in year y. For example, for age class 17, whose modal grade is 11:

if the cell is in subgroup **a**,

$N_{9,84}$ denotes the 1984 estimate of the number of students of age 15 in grade 9;

if the cell is in subgroup **b**,

$N_{9,84}$ denotes the 1984 estimate of the number of students of age 15 but **not** in grade 9;

if the cell is in subgroup c,

$N_{9,84}$ denotes the 1984 estimate of the number of students in grade 9 but not of age 15.

The six estimates for each cell were then adjusted for cohort size and projected to the year 1985 by using Bureau of the Census population projections by single years of age for 1983, 1984, and 1985, as of July 1 of each year. (Bureau of the Census, Series p 25, No. 952, issued in October, 1986.) These projections were adjusted for the difference in age groupings resulting from the following variations in the definitions of age:

Census projection: years completed before July 1;

CPS: years completed before October (approximately);

NAEP: years completed before October 1 of the following year.

Let

$p_{j,y}$ = the Census projection for the age (adjusted to the NAEP definition of age and y = 1983 and 1984) for year y and age j,

$p_{j,85}$ = the 1985 Census projection for age j, and

$N_{j,y}$ = the CPS estimates for year y, age j .

Then the projections for the year 1985, $N'_{j,y'}$ were obtained by

$$N'_{j,y} = N_{j,y}\, p_{j,85}/p_{j,y} .$$

Note that the $N'_{j,y}$ each relates to one of the subgroups a, b, or c, within an age class. The $P_{j,85}$ and $P_{j,y}$ relate to the total population in the specified age and $P_{j,85}/P_{j,y}$ provides a uniform and approximate adjustment for cohort size for each of the three subgroups a, b, and c.

The projection x' for a cell was then taken to be the arithmetic mean of the six values $N'_{j,y'}$. This was modified by a factor reflecting dropouts and school recidivists (i.e., students that did not advance to the 11th grade), as discussed below.

Retention Factors

The independent estimates (x') for each poststratification cell were further modified by retention factors to reflect the fact that an appreciable proportion of students of age 16 are no longer in school one year later, that an appreciable proportion of students in grade 10 are no longer in school one year later, and that an appreciable proportion of students of age 16 in grade 10 are not in grade 11 one year later. We name the proportions still in school one year later, respectively, the "grade retention factor," the "age retention factor," and the "grade-age retention factor," denoted R_1, R_2 and R_3. For each poststratification cell, the estimates, x', defined above are the initial estimates before applying the retention factors. We denote these as follows:

T_{ag} = x' for students of age 17 in grade 11;
T_a = x' for students of age 17 not in grade 11;
T_g = x' for students in grade 11 not of age 17.

The same symbols marked prime (T'_{ag}, T'_a, T'_g) denote the corresponding values, for a particular poststratification cell, adjusted for retention. We define

$$T'_{ag} + T'_g = (T_g + T_{ag}) R_1$$
$$T'_{ag} + T'_a = (T_{ag} + T_a) R_2$$
$$T'_{ag} = T_{ag} R_3.$$

That is, the initial estimate of students in grade 11 is adjusted by the factor R_1, the initial estimate of students of age 17 is adjusted by the factor R_2, and the initial estimate of students that are both of age 17 and in grade 11 is adjusted by the factor R_3. Solving these equations, we obtain

$$T'_g = T_g R_1 - T_{ag}(R_3 - R_1)$$
$$T'_a = T_a R_2 - T_{ag}(R_3 - R_2)$$
$$T'_{ag} = T_{ag} R_3$$

After evaluating several alternatives the values of R_1, R_2, and R_3 were estimated for two subgroups resulting from collapsing the 13 initial poststratification subgroups as follows:

1: all non-black, non-Hispanic (white/other); and

2: all blacks and Hispanics.

Estimation of R1 (Grade Retention Factor)

For subgroup i (i = 1,2), estimates $R'_{1i,83}$ and $R'_{1i,84}$ can be inferred from each of the 1983 and 1984 CPS tabulations, respectively. We assume that retention factors estimated from the 1983-1984 CPS provide estimates of the 1985 retention factor. For the 1983 CPS, we define

g_{iaj} = 1983 CPS estimate of enrollment for subgroup i in grade j and age a (where j=0 for grade 10 and j=1 for grade 11); and

p_{ia} = 1983 CPS estimate, for subgroup i, of the total enrollment of age a.

Then,

$$g_{ia0} \times \frac{p_{i,a+1}}{p_{ia}}$$

can be used as an estimate based entirely on the 1983 CPS estimate of the number of students of age a+1 that would be in grade 11 if there had been no dropouts or recidivists. Also, g_{ial} is the estimated number in grade 11. Thus,

$$R'_{1i,83} = \frac{\sum_a g_{ial}}{\sum_a [g_{ia0}p_{i,a+1}/p_{i,a}]}$$

provides an estimate of R_1 based on the 1983 CPS school attendance figures by age and grade, adjusted for cohort size. A second estimate of R_1 for subgroup i, namely $R'_{1i,84}$, is made in the same way from the 1984 CPS tabulations. A third estimate, R^*_{ji}, is provided by the ratio of the

CPS estimate of total enrollment in grade 11 in 1984 to total enrollment in grade 10 in 1983. Then R_1 is obtained as the mean of these three estimates; that is

$$R_{ji} = \frac{R'_{ji.83} + R'_{ji.84} + R''_{1i}}{3}$$

Estimation of R_2 (Age Retention Factor)

Using the CPS tabulations, an estimate of the age retention factor R_{2i} for the i-th subgroup (i = 1,2) can be obtained as the ratio of the proportion of 16 year olds that were in school in the 1984 to the proportion of 15 year olds that were in school in 1983 from the 1983 and 1984 CPS tabulations. It should be noted that age 17 according to the NAEP definition is nearly the same as age 16 according to the CPS definition. This difference in terminology presumably is explained by the fact that the CPS age is determined as of October and the NAEP age is for the cohort that started in age 16 or grade 11 in October but are about seven months older at the time of the NAEP assessment. Let

$n_{i16,84}$ = number of 16-year olds in school (sum over all grades) from 1984 CPS, for subgroup i; and

$n_{i15,83}$ = number of 15 year olds in school from 1983 CPS, for subgroup i.

Then, the age retention factor is computed by:

$$R_{2i} = \frac{n_{i16,84}}{n_{i15,83}}$$

Estimation of R_3 (Age-Grade Retention Factor)

For subgroup i (i = 1,2), an estimate of R_{3i}, was obtained from the CPS tabulations as the ratio

$$R_{3i} = \frac{\text{Students of age class 17 in grade 11 per 1984 CPS}}{\text{Students of age class 16 in grade 10 per 1983 CPS}}$$

Calculation of Composite Estimates

An estimate x^* for each cell was also obtained from the NAEP sample of students in the spiral assessment in the cells. The estimate x^* is equal to the sum of the weights (adjusted for nonresponse and then trimmed) of the students sampled for the spiral assessments. A composite estimator was then formed as the weighted mean of x' and x^*, the weight being inversely proportional to the approximate variances of x' and x^*.

To approximate the variance of x', we note that x' is roughly the mean of six CPS estimates. The CPS sampling rate is about 1/1600. Thus, the size of the CPS sample in the cell is about $x'/1600$ and the relvariance of x' is about $1600/x'$ multiplied by a design-effect factor of approximately 1.2. The relvariance of the mean of six such estimates can be taken to be about $(1.2)(1.5)\ 1600/6x' = 48/x'$. The 1.5 factor reflects approximately the relative increase in variance due to the correlation between CPS samples in successive years. This correlation arises primarily because of an overlap of about 40 percent between CPS sample households in successive years.

The variance of x^* for the various cells were estimated directly from the NAEP sample by a jackknife procedure. Since these variance estimates are themselves subject to substantial sampling error, they were smoothed in the following way. First, for each cell, the jackknife estimate of relvariance was multiplied by the sample size to obtain an estimated unit relvariance. Then, separately for subgroups **a**, **b**, and **c**, the average unit relvariance was computed for three combinations of subgroups, namely

subgroups 1, 3, and 6
subgroups 2, 4, 5, and 7
subgroups 8, 9, 10, 11, 12, and 13.

For each cell, the average unit relvariance so computed was divided by the student sample size in the cell to obtain the relvariance for use in the composite estimator.

Table 6-1 shows for age class 17, the estimates of the numbers of students in each of the 39 subclasses based on the CPS estimates, adjusted for retention, and 1986 NAEP. In the tables, the estimates in the columns headed "NAEP" are the sums of the NAEP weights before poststratification adjustment, and the V_N^2 are smoothed approximations to the relvariances

Table 6-1. 1986 spiral estimates, independent estimates, and adjusted estimates for Age Class 17, by poststratification cells

Cell	Grade and age					Age only					Grade only				
	NAEP Estimate	V_N^2	Independent Estimate	V_C^2	Adjusted Estimate	NAEP Estimate	V_N^2	Independent Estimate	V_C^2	Adjusted Estimate	NAEP Estimate	V_N^2	Independent Estimate	V_C^2	Adjusted Estimate
1	225,153	0.0722	238,912	0.0020	238,539	69,927	0.0546	86,145	0.0056	84,642	84,191	0.0446	92,693	0.0052	91,809
2	196,700	0.0762	222,239	0.0022	221,535	47,304	0.0840	77,155	0.0062	75,097	72,919	0.0668	75,899	0.0063	75,641
3	290,596	0.0494	376,388	0.0013	374,231	78,359	0.0426	134,419	0.0036	130,086	69,361	0.0451	126,023	0.0038	121,606
4	361,895	0.0355	239,301	0.0020	245,861	85,363	0.0379	83,893	0.0057	84,086	83,212	0.0468	70,494	0.0068	72,108
5	255,703	0.0516	341,965	0.0014	339,681	65,026	0.0546	144,751	0.0033	140,186	71,003	0.0622	128,199	0.0037	124,951
6	253,364	0.0465	223,740	0.0021	225,048	77,669	0.0353	85,367	0.0056	84,311	78,347	0.0338	82,524	0.0058	81,910
7	130,530	0.1040	205,926	0.0023	204,273	39,644	0.0966	61,443	0.0078	59,811	47,213	0.0941	57,233	0.0084	56,413
8	53,466	0.0393	30,573	0.0157	37,108	57,788	0.0304	38,359	0.0125	44,030	40,298	0.0341	39,140	0.0123	39,446
9	100,221	0.0174	95,535	0.0050	96,585	63,550	0.0238	80,797	0.0059	77,354	54,028	0.0191	75,025	0.0064	69,763
10	47,291	0.0485	57,280	0.0084	55,808	57,314	0.0406	44,391	0.0108	47,110	45,532	0.0341	48,008	0.0100	47,447
11	95,012	0.0157	100,455	0.0048	99,184	65,928	0.0182	89,797	0.0053	84,371	58,925	0.0149	90,542	0.0053	82,260
12	87,045	0.0204	103,651	0.0046	100,573	53,098	0.0281	65,234	0.0074	62,716	45,846	0.0231	60,990	0.0079	57,139
13	84,543	0.0419	63,974	0.0075	67,097	40,373	0.0618	42,210	0.0114	41,925	63,202	0.0359	45,164	0.0106	49,287

Summary of national totals (in 1,000's)

	Grade and age (1)	Age only (2)	Grade only (3)	Age (1)+(2)	Grade (1)+(3)	Age and/or grade (Grage) (1)+(2)+(3)
NAEP	2,182	801	814	2,983	2,996	3,797
Independent	2,300	1,034	992	3,334	3,292	4,326
Adjusted	2,306	1,016	970	3,321	3,275	4,291

of the estimates. The estimates in the columns headed "Independent" are projections based on the CPS estimates and census projections, and the V_C^2 are their approximate relvariances. The columns headed "Adjusted" display the composite or "adjusted" estimates.

Note that in the national totals shown at the bottom of the table the adjusted total is not necessarily a weighted mean of the two figures above it, although this is true for each subclass.

6.5.2 Poststratification Adjustment Factors

For the 1987 High School Transcript Study, the poststratification adjustment factors for each of the 39 cells are shown in Table 6-2. These factors are the ratios of each adjusted estimate from Table 6-1, to the Transcript Study estimate of the same subpopulation.

6.6 Final Student Weights

Transcript Study estimates of student characteristics are based on final student weights, that is, the weight resulting after adjusting the student base weight for nonresponse, trimming, and poststratification. The student final weight, W^*, is given by

$$W^* = W' \cdot f_5 \cdot f_6;$$

where

W' = nonresponse adjusted student base weight, (as defined in Section 6.2);

f_5 = trimming factor (as discussed in 6.4);

and

f_6 = poststratification factor (as discussed in 6.5).

The sum of the final student weights is the estimate of population size for students who were in the eleventh grade and/or seventeen years old in 1985-86. The variation in the final weights is large enough that one should not attempt to analyze the data to make population estimates without using the weights.

Table 6.2 Poststratification factors for the 1987 High School Transcript Study by age/grade class and poststratification cells

	Age 17/Grade 11		
Cell	Grade and age	Age only	Grade only
1	0.9105	0.9189	0.9737
2	1.1813	1.4898	1.1378
3	1.2220	1.6897	1.5119
4	0.7005	0.8673	0.8161
5	1.2608	1.9249	1.6718
6	0.7882	1.0119	0.9865
7	1.5210	1.0756	1.2336
8	0.7241	1.1114	1.2239
9	0.9362	1.2659	1.3282
10	1.1425	1.3985	1.2004
11	1.2749	1.2557	1.3179
12	1.2749	1.2557	1.3179
13	0.9722	1.3632	0.9812

6.7 Special Nonresponse Adjustment for Handicapped Students with a Special Education Student Questionnaire Returned

A separate file of records has been provided containing data for those handicapped students for whom a Special Education Student Questionnaire was returned. As discussed in Chapter 3, such students formed a subset of the sample of handicapped students for whom transcript data was collected and coded.

Appropriate weights for records on this file were derived from the weights for handicapped students on the full Transcript file, with the addition of a further nonresponse adjustment, designed to account for the nonresponse to the Special Education Student Questionnaire for otherwise responding handicapped students. This factor, f_7, is calculated separately by poststratum and is given by

$$f_{7p} = \frac{\sum_{i \epsilon A_p} W_i''}{\sum_{i \epsilon B_p} W_i''}$$

where set A_p consists of the set of handicapped students within poststratum p, and set B_p consists of the subset of set A_p for which a questionnaire was received and coded.

This factor was also derived using each of the 36 sets of replicate weights in turn. The Special Education Student Questionnaire student weight for a handicapped student in poststratum p is given by

$$W''' = f_{7p} W''$$

with an analagous calculation used to give rise to 36 replicate Special Education Student Questionnaire student weights which were included on the file along with W''' for each record.

6.8 Variance Estimation

Variances for Transcript Study estimates were computed using the Jackknife Repeated Replication procedure. This technique is applicable for common statistics such as means and ratios and also for more complex statistics.

The JRR method, as implemented for this study, began with defining pairs of clustered PSUs, pairs of individual PSUS or in the case of some large certainty PSUs, paired half-samples of schools within a single split PSU. This pairing can be viewed as defining H variance strata (h = 1, 2, ..., H), with two PSUs per stratum. The first replicate is formed by deleting one unit at random from the first variance stratum, inflating the weight of the remaining unit to weight up to the variance stratum total, and using all other units from the other (H-1) strata. This procedure is carried out for each variance stratum resulting in H replicates, each of which provides an estimate of the population total.

Let the full sample estimate be $\hat{\theta}$ and let $\hat{\theta}_h$ be the estimate from the replicate in which one unit from variance stratum h is randomly deleted and the other weighted up. The jackknife estimate of the variance is given by

$$\text{est var}\left\{\hat{\theta}\right\} = \sum_{h=1}^{H} \left(\hat{\theta}_h - \hat{\theta}\right)^2 .$$

The pseudo-value $\hat{\theta}_h$ represents an estimate in which the base weights have been adjusted for nonresponse and poststratification. These procedures were carried through separately for each of the H replicates, and the jackknife variance estimator reflects the contributions to or reductions in variance that result from such adjustments. Trimming was not repeated for any of the replicates.

6.8.1 Creation of 36 Jackknife Pairs for Variance Estimation

Non-certainty PSUs were formed into clusters of two PSUs each before defining the pairs to be used for variance estimation. These doublets were formed judgmentally of PSUs that differed at the stratum level with respect to percent change in population between the 1970 and 1980 censuses; percent black population; percent Hispanic population; percent urban population; and percent farm population. The doublets were then paired judgmentally based on similarity in the above characteristics and in educational expenditure per student. Fifteen pairs were designated by this procedure.

Twenty-six smaller certainty PSUs were paired on the bases of similarity in the population characteristics listed above and in educational expenditure per capita. Each of the remaining eight certainty PSUs constituted a jackknife pair in itself. The two members of a pair were defined by selecting two equal probability systematic samples of schools within each PSU.

6.8.2 The Jackknife Factors

The jackknife factors are applied to the student weights of a pair member when the other member of the pair has been dropped out for that replicate. Usually the weights of the remaining pair member are doubled (i.e., the jackknife factor equals 2.0). However, if the paired strata had rather different 1980 populations, the jackknife factors used were computed differently. The jackknife factor, f_i, for the i-th member of a pair i = 1, 2, was given by the following equation:

$$f_i = 1 + \frac{\sum_A W_h Y_h}{\sum_B W_h Y_h}$$

where W_h = the PSU weight for PSU "h";

Y_h = the 1980 population for PSU "h";

Set A consists of all PSUs in pair member "j" (j = 3-i); and

Set B consists of all PSUs in pair member "i".

7. 1987 HIGH SCHOOL TRANSCRIPT STUDY DATA FILES

Data from the 1987 High School Transcript Study are organized into six data files encompassing the different levels of information: (1) Master CSSC File; (2) Course Offerings File; (3) School File; (4) Student File; (5) Special Education Student Questionnaire File; and (6) Transcript File. The relationship between the files is shown in Figure 7-1. Except for the Master CSSC File (which is not related to individual schools or students), all files can be linked by PSU school identifiers. The Student, Special Education Student Questionnaire, and Transcript Files can be linked by student identifiers; and the Master CSSC can be linked to the Course Offerings or Transcript File by CSSC number. More detailed information on the use of these data files is contained in the User's Manual for the 1987 High School Transcript Study Data Files.

To identify a specific school, the PSU and school IDs must be used in combination; to identify students, the PSU, school, and student IDs must also be used in combination. Each school has a unique PSU/School ID combination, and each student has a unique PSU/School/Student ID combination.

Weights, developed using the procedures described in Chapter 6, are contained in the Student File and the Special Education Student Questionnaire File. For general purposes, the "FINAL" weight should be used in analysis.

7.1 Master CSSC File

The Master CSSC File contains all codes in the modified version of the Classification of Secondary School Courses (CSSC) used in this study. There are 3,179 records, sorted by CSSC number. In addition to the original six-digit CSSC codes, the file contains two groups of new codes and a seventh digit for all codes, modifications developed by Policy Studies Associates and Westat. These modifications are documented in Appendix D.

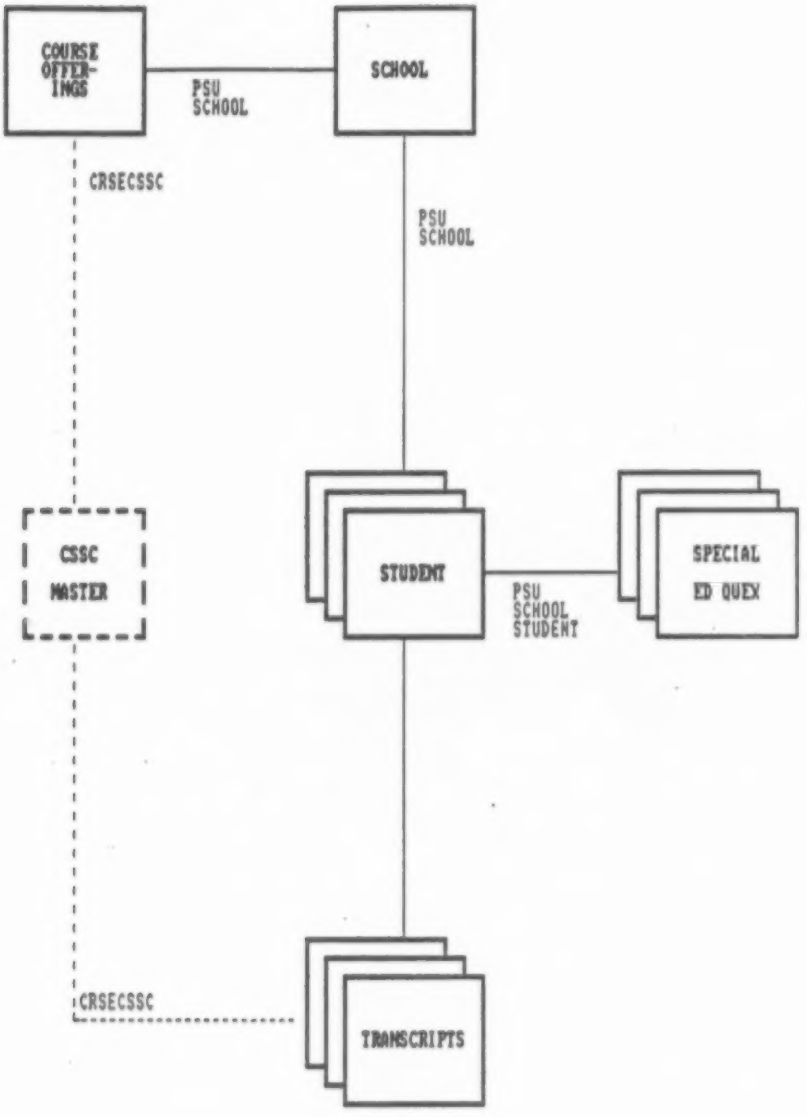

FIGURE 7-1

RELATIONSHIP OF PROJECT DATA FILES

The first group of new codes includes those added to the existing categories in the CSSC (categories are signified by the first two digits of the code); additions were made in only those cases when courses were encountered on the transcripts that were clearly different from codes already contained in the CSSC.

The second group of additional codes are specifically for special education courses, which comprise three newly developed two-digit categories for the CSSC.

A further modification to the CSSC is the addition of a seventh digit to all codes. When a course on a transcript was limited in enrollment to special education students, they were coded using the regular CSSC code with a special education indicator (0 or 2)[1] added as the seventh digit. Any course not so limited has a "1" in the seventh digit.

The CSSC Master File is organized by the CSSC code and contains two variables, the CSSC course code and the standard course title. Many CSSC codes have more than one title in the file.

7.2 Course Offerings File

The Course Offerings File is organized by school and contains one record for each course listed in the school's course catalogue. Each of the 59,698 records contains the PSU/school IDs, course title, course CSSC code, and five additional pieces of information about the course: if taught off campus, if taught in a language other than English, if it is a remedial or below-grade-level course, if it is an honors course, and if the course was composed of separately codeable parts. The file is sorted by PSU/school IDs.

As discussed in Section 5.3, the Course Offerings File is not intended to be a complete listing of courses offered in all participating schools. It contains only those courses listed in the course catalogs received. A complete listing of all courses on the transcripts can be extracted only from the Transcript File.

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[1] The values of the seventh digit are as follows: 0 = a functional level course limited in enrollment to special education students; 1 = a regular course not limited in enrollment to special education students; 2 = a special education course not at the functional level, but limited in enrollment to special education students.

7.3 School File

The School File is sorted by PSU/school ID and contains one record for each of the 497 sample schools. School variables gathered during the Transcript Study are included as well as the school's responses to the NAEP School Characteristics and Policy Questionnaire (gathered for most schools in 1986).

7.4 Student File

The Student File contains one record for each of the 34,140 students for whom transcripts were obtained and coded. Students are identified by the combination of PSU, School, and Student ID variables, and the file is sorted by this group of variables. The file contains the demographic information gathered for each student, sampling information, handicapped status, weights to be used in analysis, and replicate weights for variance estimation. The final weight for each student is the variable "FINSTUWT," and the component weights used to derive that final weight are also included. For students for whom the data are applicable the file also contains: handicapping condition (if handicapped), and the scrambled NAEP Student ID or NAEP Excluded Student ID (if the student participated in or was excluded from 1986 NAEP). These scrambled NAEP IDs can be used to link Transcript Study files to the public use data tape from 1986 NAEP; however, the appropriate weights to be used in such a linked analysis are not yet available.

7.5 Special Education Student Questionnaire File

School special education staff members were asked to fill out a Special Education Student Questionnaire for each handicapped student sampled for the study. The Special Education Student Questionnaire File contains one record for each of 6,064 students, with data from these completed questionnaires and weights appropriate for use with these data. The file is sorted by PSU, School, and Student ID.

7.6 Transcript File

The Transcript File contains one record for each of the courses appearing on the sampled students' transcripts. This is an extremely large file, containing 1,030,374 records. Courses are identified by PSU/School/Student ID and course sequence number (within students). Variables for each course record include grade level when taken, school year when taken, course title, grade received (original and standardized), credit received (original and standardized), course CSSC code, and the four additional course variables contained in the Course Offerings File for the course: if taught off campus, if taught in a language other than English, if it is a remedial or below-grade-level course, and if it is an honors course.

APPENDIX A

1987 HIGH SCHOOL TRANSCRIPT STUDY INFORMATION PACKAGE

1987 HIGH SCHOOL TRANSCRIPT STUDY

Sponsored by:

U.S. Department of Education

- Center for Education Statistics
- National Assessment of Vocational Education
- Office of Special Education and Rehabilitative Services
- Office of Bilingual Education and Minority Languages Affairs

National Science Foundation

Conducted by:

WESTAT
1650 Research Blvd.
Rockville, MD 20850

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF THE ASSISTANT SECRETARY
FOR EDUCATIONAL RESEARCH AND IMPROVEMENT

September 4, 1987

Dear Principal:

The Center for Education Statistics has authorized Westat, Inc., of Rockville, Maryland--a survey research firm with many years of experience in education-related survey research--to obtain student transcript data from schools selected two years ago to participate in the 1985-86 National Assessment of Educational Progress. The transcripts were not requested at the time of the 1985-86 assessment because the selected students had not yet graduated from high school.

The purpose of the 1987 High School Transcript Study is to supply data to educational researchers and policy analysts on course-taking patterns, the relationship of these patterns to achievement, and issues related to special education and vocational education in secondary schools across the nation. The 1987 High School Transcript Study is sponsored by several offices within the United States Department of Education and by the National Science Foundation.

The granting of Education Department authority for collection of the transcript data has been made pursuant to the provisions of the Family Education Rights and Privacy Act (FERPA) (20 U.S.C. 1232g), as implemented by 34 CFR 99.31(a)(3)(ii) and 99.35. These laws and regulations permit an educational agency to disclose records to authorized representatives of the Secretary of Education without the prior consent of the survey participants, in connection with the audit and evaluation of Federal and State supported education programs. The privacy of the information you are asked to supply to Westat will be protected as required by FERPA, and will be further protected by the removal of names and other identifying information. A copy of the relevant section of FERPA regulations is reproduced on the reverse side of this page.

Your school has been selected to participate in this very important study. Your participation is needed to make the results of this study comprehensive, accurate, and timely. No student time is involved in the study; all students' names and other individually identifying information will be removed from the collected data before the data leaves the school; and you will be reimbursed at your standard rate for supplying transcripts. Detailed information on the role of participating schools and the timeframe for data collection are being provided to you by Westat.

I would appreciate your cooperation in this important study. If you have any questions about the study or its procedures, I may be contacted at 202/357-6773, at the Department of Education, or you may contact Westat directly.

Sincerely,

Andrew Kolstad

Andrew Kolstad
Project Officer

WASHINGTON, D.C. 20208

§ 99.31 Prior consent for disclosure not required.

(a) An educational agency or institution may disclose personally identifiable information from the education records of a student without the written consent of the parent of the student or the eligible student if the disclosure is—

(1) To other school officials, including teachers, within the educational institution or local educational agency who have been determined by the agency or institution to have legitimate educational interests;

(2) To officials of another school or school system in which the student seeks or intends to enroll, subject to the requirements set forth in § 99.34;

(3) Subject to the conditions set forth in § 99.35, to authorized representatives of:

(i) The Comptroller General of the United States,

(ii) The Secretary, or

(iii) State educational authorities;

(4) In connection with financial aid for which a student has applied or which a student has received; *Provided*, That personally identifiable information from the education records of the student may be disclosed only as may be necessary for such purposes as:

(i) To determine the eligibility of the student for financial aid,

(ii) To determine the amount of the financial aid,

(iii) To determine the conditions which will be imposed regarding the financial aid, or

(iv) To enforce the terms or conditions of the financial aid;

(5) To State and local officials or authorities to whom information is specifically required to be reported or disclosed pursuant to State statute adopted prior to November 19, 1974. This paragraph applies only to statutes which require that specific information be disclosed to State or local officials and does not apply to statutes which permit but do not require disclosure. Nothing in this paragraph shall prevent a State from further limiting the number or type of State or local officials to whom disclosures are made under this paragraph;

(6) To organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction; *Provided*, That the studies are conducted in a manner which will not permit the personal identification of students and their parents by individuals other than representatives of the organization and the information will be destroyed when no longer needed for the purposes for which the study was conducted; the term "organizations" includes, but is not limited to, Federal, State and local agencies, and independent organizations;

(7) To accrediting organizations in order to carry out their accrediting functions;

(8) To parents of a dependent student, as defined in section 152 of the Internal Revenue Code of 1954;

(9) To comply with a judicial order or lawfully issued subpoena; *Provided*, That the educational agency or institution makes a reasonable effort to notify the parent of the student or the eligible student of the order or subpoena in advance of compliance therewith; and

(10) To appropriate parties in a health or safety emergency subject to the conditions set forth in § 99.36.

(b) This section shall not be construed to require or preclude disclosure of any personally identifiable information from the education records of a student by an educational agency or institution to the parties set forth in paragraph (a) of this section.

(20 U.S.C. 1232g(b)(1))

§ 99.32 Record of requests and disclosures required to be maintained.

(a) An educational agency or institution shall for each request for and each disclosure of personally identifiable information from the education records of a student, maintain a record kept with the education records of the student which indicates:

(1) The parties who have requested or obtained personally identifiable information from the education records of the student, and

(2) The legitimate interests these parties had in requesting or obtaining the information.

(b) Paragraph (a) of this section does not apply:

(1) To requests by or disclosure to a parent of a student or an eligible student;

(ii) To requests by or disclosures to school officials under § 99.31(a)(1);

(iii) If there is written consent of a parent of a student or an eligible student, or

(iv) To requests for or disclosure of directory information under § 99.37.

(c) The record of requests and disclosures may be inspected:

(1) By the parent of the student or the eligible student,

(2) By the school official and his or her assistants who are responsible for the custody of the records, and

(3) For the purpose of auditing the recordkeeping procedures of the educational agency or institution by the parties authorized in, and under the conditions set forth in § 99.31(a) (1) and (2).

(20 U.S.C. 1232g(b)(4)(A))

§ 99.33 Limitation on redisclosure.

(a) An educational agency or institution may disclose personally identifiable information from the education records of a student only on the condition that the party to whom the information is disclosed will not disclose the information to any other party without the prior written consent of the parent of the student or the eligible student, except that the personally identifiable information which is disclosed to an institution, agency or organization may be used by its officers, employees and agents, but only for the purposes for which the disclosure was made.

(b) Paragraph (a) of this section does not preclude an agency or institution from disclosing personally identifiable information under § 99.31 with the understanding that the information will be redisclosed to other parties under that section; *Provided*, That the recordkeeping requirements of § 99.32 are met with respect to each of those parties.

(c) An educational agency or institution shall, except for the disclosure of directory information under § 99.37, inform the party to whom a disclosure is made of the requirement set forth in paragraph (a) of this section.

(20 U.S.C. 1232g(b)(4)(B))

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The granting of Education Department authority for collection of the transcript data has been made pursuant to the provisions of the Family Education Rights and Privacy Act (FERPA) (20 U.S.C. 1232g), as implemented by 34 CFR 99.31(a)(3)(ii) and 99.35. These laws and regulations permit an educational agency to disclose records to authorized representatives of the Secretary of Education without the prior consent of the survey participants, in connection with the audit and evaluation of Federal and State supported education programs. The privacy of the information you are asked to supply to Westat will be protected as required by FERPA, and will be further protected by the removal of names and other identifying information. A copy of the relevant section of FERPA regulations is reproduced on the reverse side of this page.

Your school has been selected to participate in this very important study. Your participation is needed to make the results of this study comprehensive, accurate, and timely. No student time is involved in the study; all students' names and other individually identifying information will be removed from the collected data before the data leaves the school; and you will be reimbursed at your standard rate for supplying transcripts. Detailed information on the role of participating schools and the timeframe for data collection are being provided to you by Westat.

I would appreciate your cooperation in this important study. If you have any questions about the study or its procedures, I may be contacted at 202/357-6773, at the Department of Education, or you may contact Westat directly.

Sincerely,

Andrew Kolstad

Andrew Kolstad
Project Officer

WASHINGTON, D.C. 20208

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(1) To other school officials, including teachers, within the educational institution or local educational agency who have been determined by the agency or institution to have legitimate educational interests;

(2) To officials of another school or school system in which the student seeks or intends to enroll, subject to the requirements set forth in § 99.34;

(3) Subject to the conditions set forth in § 99.35, to authorized representatives of:

(i) The Comptroller General of the United States,

(ii) The Secretary, or

(iii) State educational authorities;

(4) In connection with financial aid for which a student has applied or which a student has received; *Provided*, That personally identifiable information from the education records of the student may be disclosed only as may be necessary for such purposes as:

(i) To determine the eligibility of the student for financial aid,

(ii) To determine the amount of the financial aid,

(iii) To determine the conditions which will be imposed regarding the financial aid, or

(iv) To enforce the terms or conditions of the financial aid;

(5) To State and local officials or authorities to whom information is specifically required to be reported or disclosed pursuant to State statute adopted prior to November 19, 1974. This paragraph applies only to statutes which require that specific information be disclosed to State or local officials and does not apply to statutes which permit but do not require disclosure. Nothing in this paragraph shall prevent a State from further limiting the number or type of State or local officials to whom disclosures are made under this paragraph;

(6) To organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction; *Provided*, That the studies are conducted in a manner which will not permit the personal identification of students and their parents by individuals other than representatives of the organization and the information will be destroyed when no longer needed for the purposes for which the study was conducted; the term "organizations" includes, but is not limited to, Federal, State and local agencies, and independent organizations;

(7) To accrediting organizations in order to carry out their accrediting functions;

(8) To parents of a dependent student, as defined in section 152 of the Internal Revenue Code of 1954;

(9) To comply with a judicial order or lawfully issued subpoena; *Provided*, That the educational agency or institution makes a reasonable effort to notify the parent of the student or the eligible student of the order or subpoena in advance of compliance therewith; and

(10) To appropriate parties in a health or safety emergency subject to the conditions set forth in § 99.36.

(b) This section shall not be construed to require or preclude disclosure of any personally identifiable information from the education records of a student by an educational agency or institution to the parties set forth in paragraph (a) of this section.

(20 U.S.C. 1232g(b)(1))

§ 99.32 Record of requests and disclosures required to be maintained.

(a) An educational agency or institution shall for each request for and each disclosure of personally identifiable information from the education records of a student, maintain a record kept with the education records of the student which indicates:

(1) The parties who have requested or obtained personally identifiable information from the education records of the student, and

(2) The legitimate interests these parties had in requesting or obtaining the information.

(b) Paragraph (a) of this section does not apply:

(i) To requests by or disclosure to a parent of a student or an eligible student;

(ii) To requests by or disclosures to school officials under § 99.31(a)(1);

(iii) If there is written consent of a parent of a student or an eligible student, or

(iv) To requests for or disclosure of directory information under § 99.37.

(c) The record of requests and disclosures may be inspected:

(1) By the parent of the student or the eligible student,

(2) By the school official and his or her assistants who are responsible for the custody of the records, and

(3) For the purpose of auditing the recordkeeping procedures of the educational agency or institution by the parties authorized in, and under the conditions set forth in § 99.31(a) (1) and (3).

(20 U.S.C. 1232g(b)(4)(A))

§ 99.33 Limitation on redisclosure.

(a) An educational agency or institution may disclose personally identifiable information from the education records of a student only on the condition that the party to whom the information is disclosed will not disclose the information to any other party without the prior written consent of the parent of the student or the eligible student, except that the personally identifiable information which is disclosed to an institution, agency or organization may be used by its officers, employees and agents, but only for the purposes for which the disclosure was made.

(b) Paragraph (a) of this section does not preclude an agency or institution from disclosing personally identifiable information under § 99.31 with the understanding that the information will be redisclosed to other parties under that section; *Provided*, That the recordkeeping requirements of § 99.32 are met with respect to each of those parties.

(c) An educational agency or institution shall, except for the disclosure of directory information under § 99.37, inform the party to whom a disclosure is made of the requirement set forth in paragraph (a) of this section.

(20 U.S.C. 1232g(b)(4)(B))

WESTAT
An Employee-Owned Research Corporation
1650 Research Blvd • Rockville, MD 20850 (301) 251-1500

September 4, 1987

Dear Principal:

We look forward to working with you and your staff on the 1987 High School Transcript Study. This is an important study, and each participating school will make a valuable contribution to its success. Prior to our contacting you directly, the U.S. Department of Education requested the support of your State's Chief State School Officer and State Director of Special Education. We have also written to and spoken with your district superintendent regarding your school's involvement in the study.

All secondary schools sampled for the 1985-86 National Assessment of Educational Progress (NAEP) are being asked to participate in the 1987 High School Transcript Study. The transcript study does not require any student time. It will obtain high school transcripts for a sample of students who were in grade 11 or were 17 years old during the 1985-86 school year. Where schools have maintained records from the 1985-86 National Assessment, we will include those students in our sample. Where records are not available, we will select a new sample. At all schools we will request transcripts for all handicapped students who were 17 years old during the 1985-86 school year (i.e., born between October 1, 1968 and September 30, 1969) plus all handicapped students who were in grade 11 during the spring of 1986. I have enclosed a copy of a memorandum from the Office of Special Education Programs discussing the legislative mandate for the study.

We will begin visiting participating schools in early October to identify the student sample and organize the preparation of transcript information. During that visit our field representative will make specific plans to return to your school to process and collect the transcripts. The enclosed "Summary of School Activities" provides our data collection schedule. It also describes in greater detail what will be asked of participating schools and the responsibilities that will be assumed by Westat's field representatives.

As Dr. Andrew Kolstad indicated in his letter, Westat has been authorized to collect information on sampled students from their academic records pursuant to the provisions of the Family Education Rights and Privacy Act (FERPA). All students' names and other individually identifying information will be removed from the collected data before it is sent to Westat offices. All information obtained through this study will be kept confidential and will only be used for statistical reporting purposes.

Our field representative will contact you to confirm arrangements to visit your school. In the interim, should you have questions, please contact Richard Hilpert, at Westat (800) 638-8985.

We appreciate your support of educational research and look forward to working with you on the High School Transcript Study.

Sincerely,

Judy Thorne

Judy Thorne, Ph.D.
Project Director

Enclosures

UNITED STATES DEPARTMENT OF EDUCATION
WASHINGTON, D C 20202

SEP MEMORANDUM

AUG 20 1987

Contact Person

Name: Susan Thompson-Hoffman

Telephone: (202) 732-1122

SEP-87- 25

Memorandum to: STATE DIRECTORS OF SPECIAL EDUCATION

From: G. Thomas Bellamy, Ph.D.
Director, Office of Special Education Programs

Subject: Legislatively Mandated Study: 1987 High School Transcript Study

Section 403 of the Carl D. Perkins Vocational Education Act of 1984 (P.L. 98-524) requires a national assessment of vocational education with findings to be reported to Congress in January 1989. The assessment is to provide descriptions and evaluations in nine specific areas: (a) the vocational education services delivered under the Act, (b) the Act's effects on modernizing the Nation's job training needs, (c) the resources needed to meet the Nation's job training needs, (d) the coordination of vocational education with employment and training activities in the States, (e) the impact of vocational education on academic skills and employment opportunities, (f) the effectiveness of vocational education programs for individuals with limited proficiency in English, (g) the coordination of vocational education for disadvantaged and handicapped individuals, (h) the skills and competencies identified by the States to assess their vocational programs, and (i) the effectiveness of the Federal bilingual vocational training programs.

The U. S. Office of Special Education Programs is cooperating with the U. S. Center for Education Statistics, the National Assessment of Vocational Education office of the U. S. Office of Planning, Budget, and Evaluation, and the U. S. Office of Bilingual Education and Minority Languages Affairs in the development and implementation of this study. A contract has been awarded to Westat, Inc. of Rockville, Maryland by the Center for Education Statistics.

To meet the requirements for the segment of the study relating to handicapped secondary students, 1986 high school transcript data will be collected on approximately 10,000 17 year old or 11th grade handicapped students, at an

average of 20 handicapped students per school. Data on 40,000 non-handicapped students will be collected concurrently. Transcripts have been selected as a key data source because no burden is imposed on students or classroom teachers during the collection process.

Special education service providers will also be requested to complete a brief questionnaire for each handicapped student to provide demographic and special education status data. The questionnaire is expected to take 10-15 minutes to complete, for an average total response time of four hours per school.

Taken together, this information will inform Congress and other interested policymakers and program planners about the current course offerings and course-taking patterns of handicapped and non-handicapped students. It will also examine the relationship between patterns of course-taking and the educational attainment of handicapped and non-handicapped students. All personal identifiers will be removed from recorded data.

School participation in this study is governed by the prior selection of the school for the U. S. Center for Educational Statistics National Assessment of Educational Progress (NAEP). NAEP is a federally funded, periodic assessment of educational achievement in the various subject areas and disciplines taught in the nation's schools. Since 1969, NAEP has tested 9, 13, and 17 year old students in 10 subject areas. Intervals between assessments in key subject areas range from three to five years, with the last NAEP testing completed in 1986. Transcripts will be examined for all 11th grade and 17 year old handicapped students within schools selected for NAEP in 1986, regardless of whether they participated in NAEP. A list of LEA's and schools affected by this study in your State is attached.

The transcript study has been designed to minimize burden on the LEA's and schools. LEA's will be asked to furnish course lists and information on graduation requirements for the schools in the sample. Schools will be asked to provide transcripts and will be reimbursed for doing so. They will also be asked to identify the service provider most familiar with the handicapped students in the study who, in turn, will be asked to complete a brief questionnaire on each handicapped student. Westat field staff will then review the transcripts, deleting any individually identifying information. It is anticipated that school or district personnel may be needed to clarify local use of transcript abbreviations or to obtain definitions of courses using generic designations.

A letter has been sent to Chief State School Officers informing them of this study. If you would like further information about the conduct of this study, please do not hesitate to contact Susan Thompson-Hoffman, OSEP's contact person, at 202-732-1122.

I would like to thank you in advance for your cooperation in this most important survey. The results will provide us all with needed information about the course-taking patterns of students with handicaps as well as those without handicaps.

DRAFT LETTER FROM NCEA TO CATHOLIC DIOCESES

Dear Chief Administrator:

We would like to request your assistance in the 1987 High School Transcript Study sponsored by the U.S. Department of Education's Center for Education Statistics. The Center for Education Statistics has authorized Westat, Inc., of Rockville, Maryland -- a survey research firm with many years of experience in education-related survey research -- to obtain student transcript data from schools selected two years ago to participate in the 1985-86 National Assessment of Educational Progress (NAEP). The transcripts were not requested at the time of the 1985-86 assessment because the majority of the selected students had not yet graduated from high school.

The purpose of the 1987 High School Transcript Study is to supply data to educational researchers and policy analysts on course-taking patterns, the relationship of these patterns to achievement, and issues related to special education and vocational education in public, parochial, and private secondary schools across the nation. No student time is involved in the study; all students' names and other individually identifying information will be removed from the collected data before the data leaves the school. Schools will be reimbursed at the standard rate for supplying transcripts.

The schools in your diocese selected for NAEP in 1985-86 are the schools requested to participate in the Transcript Study. Enclosed in this package is a letter from Westat with a list of these schools and more information about the study. Within a few weeks, you will be contacted by a representative of Westat to discuss the study. During October and November, the schools will be contacted and arrangements made for Westat staff to obtain transcripts and course descriptions.

We would appreciate your cooperation in this study. If you have any questions, please call Dr. Judy Thorne on Westat's toll-free number: (800) 638-8985.

Sincerely,

Michael Guerra
Executive Director
Secondary Schools Department

1987 High School Transcript Study
Summary Of School Activities

This sheet summarizes the activities that will be undertaken during the site visits in October and November 1987. Hopefully, it will provide answers to some of the questions you may have. The Westat Field Representative will provide you with a more detailed description of tasks upon arrival at your school.

1. Date for the site visit will be agreed upon.

2. The Westat Field Rep will contact your school prior to the visit to confirm arrangements made.

3. The High School Transcript Study sample will be identified by the Westat Field Representative and transcripts will be requested for all students in the sample.

   a) If your school participated in the National Assessment of Educational Progress (NAEP) during 1985-86, and the NAEP materials (Student Listing Forms, Administration Schedules, and Roster of Questionnaires: Excluded Student Rosters) are available, the sample will be based on the NAEP student sample.

   b) If your school did not participate in NAEP or if the NAEP materials are no longer available, a special sample of students will be selected by the field staff. In this case, we will ask you to produce a list of all students who were in 11th grade during the 1985-86 school year.

4. Transcripts will also be requested for a sample of handicapped students who have Individualized Educational Programs (IEPs). You will be asked to prepare a list identifying those students who meet the study's specifications.

5. Your school will be reimbursed at your usual rate for providing transcripts. The Westat Field Rep will be available to assist with copying transcripts or any of the other tasks listed here.

6. The Westat Field Rep will need to review transcripts and course catalogs before leaving your school so that questions about either may be clarified.

7. A member or members of your staff will be asked to complete a Special Education Student Questionnaire for each sampled handicapped student. (During field testing, these forms took about two to five minutes per form to complete.)

8. If your school did not do so in 1986, you will be asked to complete a School Characteristics and Policy Questionnaire.

We will try to accommodate preferences expressed by you while maintaining consistent, accurate, and complete data collection procedures.

1987 High School Transcript Study

Project Milestones

Contact Chief State School Officers and State Special Education Directors	August 1987
Contact Districts and Schools	August-September 1987
Initial School Visits (identify sample; request transcripts)	October 1987
Follow-Up School Visits (collect and review transcripts; Special Education Student Questionnaires)	October-November 1987
Completion of Data Collection	December 1987

Key Aspects of High School Transcript Study

- NO STUDENT TIME IS INVOLVED. Transcript Study staff will work with your school and do as much of the work as possible to minimize the burden.
- Students' names and other individually identifying information will be removed from copies of the transcripts and from questionnaires before being sent to Westat.
- Your school will be reimbursed at your usual rate for providing transcripts.

APPENDIX B

1986 NAEP SAMPLING FORMS

Page ____ of ____

Administration Schedule

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS - SPRING, 1986

Administration Schedule

Session Scheduled For:

DATE: _____ TIME: _____

DAY: _____

LOCATION: _____

AGE/GRADE: _____

PSU# |__|__|__| School # |__|__|__|

School Name: _____

EA's Name _____ ID# |__|__|__|__|

SCHOOL: ☐ NAEP ☐ LH

NO. STUDENTS	SPIRAL NAEP	SPIRAL LH	TAPE #
TO BE ASSESSED			
ASSESSED			
ABSENT			

Student's Name First	Last	Home Room	Grade	Sex	Birthdate Month / Year	SLF (A,B,C)	LH	Student ID No.	R	Abs	IN O.S.
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											
15.											
16.											
17.											
18.											
19.											
20.											
21.											
22.											
23.											
24.											
25.											

Copies: ETS (white), Westat (yellow), School (pink and goldenrod)

Page ____ of ____

OMB #: 1850-0578
Expires: 6/30/86

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS - YEAR 17

A STUDENT LISTING FORM A A
AGE 17 OR 11th GRADE
HISPANIC STUDENTS ONLY

IMPORTANT

INSTRUCTIONS: PLEASE LIST STUDENTS WHO ARE:

- HISPANIC, AND
- IN THE ELEVENTH GRADE OR WERE BORN BETWEEN OCTOBER 1, 1968 AND SEPTEMBER 30, 1969

					FOR SUPERVISOR USE ONLY					
A Student's Name First Initial Last	B Home-room or Other Locator	C Grade	D Sex	E Birthdate Month/Year	1. If tape: Age elig.	2. Line #	3. Sel. Stud. ("S" or "T")	4 & 5 Blank	6. Line #	7. Sel "LN

Student Listing Form B

Page ____ of ____

OMB #: 1850-0578
Expires: 6/30/86

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS - YEAR 17

B STUDENT LISTING FORM B B
AGE 17 OR 11th GRADE
ASIAN OR AMERICAN INDIAN STUDENTS ONLY

IMPORTANT

INSTRUCTIONS: PLEASE LIST STUDENTS WHO ARE:

- ASIAN OR AMERICAN INDIAN, AND
- IN THE ELEVENTH GRADE OR WERE BORN BETWEEN OCTOBER 1, 1968 AND SEPTEMBER 30, 1969.

A Student's Name: First	Initial	Last	B Homeroom or Other Locator	C Grade	D Sex	E Birthdate Month/Year	FOR SUPERVISOR USE ONLY: 1. If tape: Age elig.	2. Line #	3. Sel. Stud. ("S" or "T")	4. If S: "LM" or "M"	5. BLANK	6. Line #	7. Sel. "LM"

Page ____ of ____

OMB #: 1850-0578
Expires: 6/30/86

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS - YEAR 17

C STUDENT LISTING FORM C AGE 17 OR 11th GRADE C

IMPORTANT

INSTRUCTIONS: PLEASE LIST STUDENTS WHO ARE EITHER IN THE ELEVENTH GRADE OR WERE BORN BETWEEN OCTOBER 1, 1968 AND SEPTEMBER 30, 1969 ON THE FOLLOWING FORMS:

FORM A = HISPANIC STUDENTS ONLY

FORM B = ASIAN OR AMERICAN INDIAN STUDENTS ONLY

FORM C = ALL OTHER STUDENTS

A Student's Name: First	Initial	Last	B Home-room or Other Locator	C Grade	D Sex	E Birthdate Month/Year	FOR SUPERVISOR USE ONLY: 1. If tape: Age elig.	2. Line #	3. Sel. Stud. ("S" or "T")

APPENDIX C

1987 HIGH SCHOOL TRANSCRIPT STUDY FORMS

1987 TRANSCRIPT STUDY – DISTRICT CONTACT FORM

PSU #: _____ NAEP CONTACT NAME: _____

NAME OF SCHOOL DIST.: _____

SUPERINTENDENT'S NAME: _____

TELEPHONE (___)_____

RECORD OF CALLS

DISPOSITION CODES:

11 = COOPERATING
21 = REFUSAL (INITIAL)
22 = REFUSAL (FINAL)
31 = AWAITING FORMAL REVIEW PROCESS
32 = CONTACTED, AWAITING DECISION

DATE	TIME	CALLER NAME	PERSON CONTACTED	RESULTS OF CALL

PLEASE DESCRIBE FULLY:

1. Is the District willing to cooperate? |__| Yes |__| No

   Contact: _____

   (Explain): _____

   _____

2. Are District review and clearance procedures required? |__| Yes |__| No

   If yes, what are they: _____

3. Will parent permission be required? |__| Yes |__| No

What type for whom? _____

4. Where can information on graduation requirements be obtained?

Source: _____ Location: _____

_____

a. What are the total credits needed to graduate with a "basic" diploma (not honors, voc. ed., etc.): _____

b. How does the district define a credit? _____

c. What are the graduation requirements: (list of subjects below)

English/Language Arts: _____

Math: _____

Computer Science: _____

Social Studies/History: _____

Science: _____

Foreign Language: _____

Physical Education: _____

Other (Specify): _____

d. Notes on options that will satisfy the requirements? (e.g., 1 credit of fine arts will substitute for 1 credit of computer science) _____

_____

e. Are there other kinds of diplomas available? If yes, how do the requirements vary?

_____

_____

f. Do these requirements apply to 4 years of high school? |__| Yes |__| No, specify _____

g. Are there grade requirements for graduation? If so, what? _____

_____

h. Is there a state or district competency test that is required for graduation?

_____

5. What is the location of transcript records for students/schools in 1986 NAEP sample:

a. Non-handicapped students: _____

b. Handicapped students: _____

6. **Course Lists:** Can the district provide us with most complete course lists for grades 9-12 and in sample schools, including vocational, honors, remedial, special ed. (on campus as well as off campus)? |__| Yes |__| No

   a. If no, what is the best source: |__| School |__| Other (specify) _____

   b. If yes, name and telephone number of person for followup: _____

   c. Have course lists changed during 1984-88? If yes, how: _____

   _____

   d. Course lists requested |__| Yes |__| No

   e. Are there special codes or abbreviations that are commonly used? What?

   _____

   _____

7. Course information for Special Ed. and Vocational Ed. Are all special ed. and vocational ed. courses listed on the regular course lists? |__| Yes |__| No

   If no, where can special ed. course lists be obtained? _____

   If no, where can vocational ed. course lists be obtained? _____

8. Identification of Special Ed. students:

   a. Name of Director, District Division of Special Education: _____

   b. Special Ed. Contact Person: _____

      Address, Telephone #: _____

   c. Obtaining list of students who receive Special Ed. and were eligible for NAEP Year 17:

      - From whom should we get and to what extent are records for special ed. students computerized? _____

        _____

      - Is handicapped condition available from same source? |__| Yes |__| No

        Where? _____

   d. Procedure for obtaining special ed. transcripts: _____

   _____

   e. On what basis are handicapped students assigned to schools - what are the decision rules? (IF APPLICABLE, USE CATEGORIES, NEXT PAGE) _____

   _____

These students (handicaps) attend in their regular attendance area school:

These are assigned by special procedures:

_____ _____

_____ _____

_____ _____

f. Within a school, are special ed. students scheduled into classes at the same time as regular students or at a special time? _____

_____

9. What are the district child counts by primary handicapping condition for 17 year olds (and/or 11th graders) in 1985:

Condition	Number of Students	Condition	Number of Students
Multihandicapped	_____	Seriously emotionally disturbed	_____
Mentally retarded	_____	Orthopedically impaired	_____
Hard of hearing	_____	Learning disabled	_____
Deaf	_____	Other health-impaired (Specify)_____	_____
Speech-impaired	_____	_____	_____
Visually handicapped/ blind	_____	_____	_____
Deaf-blind	_____	_____	_____

10. Does the District want to contact the schools before we do? |__| Yes |__| No

If yes, when can contacts begin with schools: _____

11. Any special circumstances/recommendations in relation to school contact?

_____

_____

12. Other Comments: _____

_____

_____

_____

8/26/87

1987 TRANSCRIPT STUDY – SCHOOL CONTACT FORM

PSU #: _____ PREVIOUS CONTACT NAME: _____

SCHOOL #: _____ NAEP COORD. IN 1986 NAEP: _____

NAME OF SCHOOL: _____

PRINCIPAL'S NAME: _____

TELEPHONE (___)_____

RECORD OF CALLS

DISPOSITION CODES:

11 = COOPERATING	31 = AWAITING FORMAL REVIEW PROCESS
23 = SCHOOL REFUSAL (INITIAL)	32 = CONTACTED, AWAITING DECISION
22 = SCHOOL REFUSAL (FINAL)	41 = SCHOOL CLOSED

DATE	TIME	CALLER NAME	PERSON CONTACTED	RESULTS OF CALL

PLEASE DESCRIBE FULLY:

1. Is the school willing to cooperate? |__| Yes |__| No

   Contact: _____

   (Explain): _____

   _____

2. School clearance procedures: _____

_____

_____

3. Will parent permission be required? |__| Yes |__| No

Explain: _____

4. a. Are NAEP materials available? |__| Yes |__| No

Contact Person: _____

b. What materials are available: |__| Complete Administration Schedule |__| SLF's

|__| Other, describe _____

c. Is it necessary to draw a new sample? |__| Yes |__| No

Comments: _____

_____

_____

5. Procedures for obtaining transcripts: (DESCRIBE) _____

_____

_____

6. Course Lists: a. If best source for grades 9-12 is school: Can the school provide us with their course lists including vocational, honors, remedial, special ed., off campus? (This is to include on campus as well as off campus lists.) |__| Yes |__| No

b. Name and telephone number of person for followup: _____

c. Are there special codes or abbreviations that are commonly used in the lists?_____

_____

_____

7. Information on Special Ed. students

- Name of Special Education Head at school level: _____
- Special Ed. contact if not same: _____
- If obtained at district level, review with school; otherwise find out about:
  a. Special procedures for obtaining transcripts for special ed. students: _____

_____

b. Source of list of students who are Special Ed.: _____

- To what extent are special ed. lists computerized? _____

_____

- We also need to know the students' handicapping condition. What is the best source for this information? (EXPLAIN): _____

_____

c. Procedures for school assignments for handicapped students: _____

- Distribution of children by school: _____

_____

d. Child count within handicapping condition for 17 year olds (and/or 11th graders) in December 1985 in the school:

Condition	Number of Students	Condition	Number of Students
Multihandicapped	_____	Seriously emotionally disturbed	_____
Mentally retarded	_____	Orthopedically impaired	_____
Hard of hearing	_____	Learning disabled	_____
Deaf	_____	Other health-impaired (Specify)_____	_____
Speech-impaired	_____	_____	_____
Visually handicapped/ blind	_____	_____	_____
Deaf-blind	_____	_____	_____

e. Course information for Special Ed.:

1. Are all of the courses taken by special ed. students listed on the regular course lists? _____

_____

2. Where can special ed. course lists be obtained? _____

_____

3. Are special ed. students scheduled into classes at the same time as regular students or at an earlier or later time? _____

_____

8. Graduation Requirements: If this information was not obtained fully at district level, complete the following:

a. Where can information on graduation requirements be obtained?

Source: _____ Location: _____

_____

b. What are the total credits needed to graduate with a "basic" diploma (not honors, voc. ed., etc.): _____

c. How does the district define a credit? _____

d. What are the graduation requirements: (list of subjects below)

English/Language Arts: _____

Math: _____

Computer Science: _____

Social Studies/History: _____

Science: _____

Foreign Language: _____

Physical Education: _____

Other (Specify): _____

e. Notes on options that will satisfy the requirements? (e.g., 1 credit of fine arts will substitute for 1 credit of computer science) _____

_____

f. Are there other kinds of diplomas available? If yes, how do the requirements vary?

_____

_____

g. Do these requirements apply to 4 years of high school? |__| Yes |__| No, specify _____

h. Are there grade requirements for graduation? If so, what? _____

_____

i. Is there a state or district competency test that is required for graduation?

_____

9. Any special circumstances/recommendations in relation to school contact?

_____

_____

10. When should EA contact the school (schedule a week)? _____

11. Other Comments: _____

_____

_____

_____

EXIT STATUS CODES

1 = Standard diploma
2 = Honors diploma
3 = Diploma with special education adjustments
4 = Certificate of attendance
5 = Still enrolled in this school
6 = Dropped out
7 = Other (including transferred, GED, unknown)

RACE/ETHNICITY CODES

W = White (not Hispanic)
B = Black (not Hispanic)
H = Hispanic (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)
A = Asian or Pacific Islander
I = American Indian or Alaskan Native
O = Other

1987 HIGH SCHOOL TRANSCRIPT STUDY

Page ___ of ___

1 TRANSCRIPT REQUEST FORM

SAMPLE OF GENERAL STUDENTS

1 ITEMS NEEDED ON TRANSCRIPTS

For each course taken:

- The name of each course (and any course or section numbers that describe the course).
- The school year during which the course was taken.
- The grade(s) the student was awarded.
- The number of credits earned for the course.

School Name: _____

Field Rep. Name: _____ PSU #: _____ School #: _____

Line No.	Student's Name First	MI	Last	Exit Status	NAEP Student ID	✓	SLF Type	Complete if no NAEP ID: Race	Grade	Sex	Mo/Yr.Born	Excluded Student ID	HSTS Student ID	TS RCD

Copies: White - Westat Blue - File Pink - School

EXIT STATUS CODES

1 = Standard diploma
2 = Honors diploma
3 = Diploma with special education adjustments
4 = Certificate of attendance
5 = Still enrolled in this school
6 = Dropped out
7 = Other (including transferred, GED, unknown)

RACE/ETHNICITY CODES

W = White (not Hispanic)
B = Black (not Hispanic)
H = Hispanic (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)
A = Asian or Pacific Islander
I = American Indian or Alaskan Native
O = Other

2 TRANSCRIPT REQUEST FORM

SPECIAL EDUCATION STUDENTS

2 ITEMS NEEDED ON TRANSCRIPTS

For each course taken:

- The name of each course (and any course or section numbers that describe the course).
- The school year during which the course was taken.
- The grade(s) the student was awarded.
- The number of credits earned for the course.

School Name: _____

Field Rep. Name: _____ PSU #: _____ School #: _____

Line No.	Student's Name First	MI	Last	Exit Status	NAEP Student ID	✓	SLF Type	Complete if no NAEP ID: Race	Grade	Sex	Mo/Yr.Born	Excluded Student ID	HSTS Student ID	TS RCD

Copies: White - Westat Green - File Pink - School

EXIT STATUS CODES

1 = Standard diploma
2 = Honors diploma
3 = Diploma with special education adjustments
4 = Certificate of attendance
5 = Still enrolled in this school
6 = Dropped out
7 = Other (including transferred, GED, unknown)

RACE/ETHNICITY CODES

W = White (not Hispanic)
B = Black (not Hispanic)
H = Hispanic (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)
A = Asian or Pacific Islander
I = American Indian or Alaskan Native
O = Other

1987 HIGH SCHOOL TRANSCRIPT STUDY

3 TRANSCRIPT REQUEST FORM

NAEP EXCLUDED STUDENTS

3 ITEMS NEEDED ON TRANSCRIPTS

For each course taken:

- The name of each course (and any course or section numbers that describe the course).
- The school year during which the course was taken.
- The grade(s) the student was awarded.
- The number of credits earned for the course.

School Name: _____

Field Rep. Name: _____ PSU #: _____ School #: _____

Line No.	Student's Name First	MI	Last	Exit Status	NAEP Student ID	J	SLF Type	Complete for all students: Race	Grade	Sex	Mo/Yr.Born	Excluded Student ID	HSTS Student ID	TS RCD

Copies: White - Westat Goldenrod - File Pink - School

D STUDENT LISTING FORM D

1987 HIGH SCHOOL TRANSCRIPT STUDY

INSTRUCTIONS (see other side for additional instructions)

PLEASE LIST THE NAMES OF ALL STUDENTS WHO WERE ENROLLED IN THE 11TH GRADE DURING SPRING 1986

NOTE: Columns B-E can be filled out either before or after the Westat field representative selects the sample

A 11th grade student's name First Initial Last	B Exit Status*	C Sex	D Race/ Ethnicity**	E Birthdate Month/Yr	For Westat Use Only	
					Line#	Sel. Stud. ( )

* HIGH SCHOOL EXIT STATUS CODES

1 Standard diploma
2 Honors diploma
3 Diploma with special education adjustments
4 Certificate of attendance
5 Still enrolled in this school
6 Dropped out
7 Other (including transferred, GED, unknown)

** RACE/ETHNICITY CODES

W White (not Hispanic)
B Black (not Hispanic)
H Hispanic (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)
A Asian or Pacific Islander
I American Indian or Alaskan Native
O Other

INSTRUCTIONS FOR FILLING OUT STUDENT LISTING FORM D

Please prepare a list of eligible students as described below. The list should be kept at the school or district office to protect the confidentiality of students' names.

1. List all students (including special education students) who were enrolled in the eleventh grade during Spring 1986.

2. If it is difficult to determine which students were in the eleventh grade during Spring 1986, it is acceptable to use the end of the 1985-86 school year. If this is difficult, then the beginning of that school year would be acceptable.

3. Once we have selected the sample, we will need to obtain sex, ethnicity, birthdate and exit status for every sampled student. School or district staff can provide this information in columns B-E either at the time the list of eligibles is prepared or after the sample has been selected.

4. Ordering the list alphabetically by last name will make the process more efficient, but is not essential.

5. Students who went elsewhere for classes should be listed if they were enrolled in your school.

6. If the school or district can provide a computer list containing all of the information requested on this form it will not be necessary to fill out this form.

E SPECIAL EDUCATION STUDENT LISTING FORM E

1987 HIGH SCHOOL TRANSCRIPT STUDY

INSTRUCTIONS (see other side for additional instructions)

PLEASE LIST NAMES AND FILL OUT COLUMNS A-E FOR ALL STUDENTS WHO HAD IEP'S DURING SPRING 1986 AND WERE IN THE 11TH GRADE

PLUS

ANY NON-11TH GRADE STUDENTS WITH IEP'S WHO WERE BORN BETWEEN OCT. 1, 1968 AND SEPT. 30, 1969

A Special Education student's name First Initial Last	B Exit Status*	C Grade Spring '86	D Sex	E Race/ Ethnicity**	F Birthdate Month/Yr

* HIGH SCHOOL EXIT STATUS CODES

1 Standard diploma
2 Honors diploma
3 Diploma with special education adjustments
4 Certificate of attendance
5 Still enrolled in this school
6 Dropped out
7 Other (including transferred, GED, unknown)

** RACE/ETHNICITY CODES

W White (not Hispanic)
B Black (not Hispanic)
H Hispanic (Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)
A Asian or Pacific Islander
I American Indian or Alaskan Native
O Other

INSTRUCTIONS FOR FILLING OUT SPECIAL EDUCATION STUDENT LISTING FORM E

Please prepare a list of all eligible special education students as described below. The list should be kept at the school or district office to protect the confidentiality of students' names.

1. List all special education students who had an Individualized Educational Program (IEP) during the Spring of 1986 and who were in the eleventh grade or (if not in the eleventh grade) were born between Oct. 1, 1968 and Sept. 30, 1969.

2. If it is difficult to determine a student's grade during the Spring of 1986, then use grade as of:

    1) December, 1985;

    2) The end of the 1985-86 school year; or

    3) The beginning of the 1985-86 school year, in that order of preference.

3. For each special education student listed, columns A-E should be filled out by entering first name, middle initial and last name, exit status, sex, race/ethnicity, and the month and year of the student's birth in the appropriate columns.

4. Ordering the list alphabetically by last name will make the process more efficient, but is not essential.

5. Special education students who went elsewhere for classes should be listed if they were enrolled in your school.

6. If the school or district can provide a computer list containing all of the information requested on this form, it will not be necessary to fill out this form.

3rd Revision
10/14/87

SAMPLING CHECKLIST

1987 HIGH SCHOOL TRANSCRIPT STUDY

Schools that DO HAVE the NAEP Administration Schedules

Before going to school, review your marked-up copies of the Administration Schedules.

1. If a student has an "X" in the column labeled "ABS", blacken out the student identification number, if there is one. Remember, if no other information for this student is lined out, s/he is in the HSTS sample.

2. Blacken out students listed in error (e.g., with a notation that the student had dropped out, was no longer enrolled, was in another session, or was listed incorrectly).

3. Mark a large "X" through schedules for tape sessions. None of these students are in HSTS sample.

At school you will need:

- Administration Schedules from the school.
- List of eligible special education students from the school.
- Your school folder containing copies of the Administration Schedules with the HSTS sample marked and the Roster of Questionnaires.
- General supplies: Transcript Request Forms 1, 2, and 3.

1. Obtain lists from the school.

   A. NAEP Administration Schedules with names and NAEP information (usually the pink copy).

   B. SLF-E or other list of all students with IEP's in the Spring of 1986 who were --

      - In 11th grade, Spring 1986, and/or
      - Born between October 1, 1968 and September 30, 1969.

2. Create combined Administration Schedules with all information including names and HSTS sample.

   A. Tape school's copy of each Administration Schedule to the copy from your school folder identifying the HSTS sample.

   B. Number pages consecutively.

3. Highlight names of students in HSTS sample, i.e., NAEP information not blackened or lined through. Remember --

   - If only the student ID has been lined-out, the student is in HSTS sample.
   - Students in NAEP tape sessions are not in sample.

4. Eliminate duplicates, comparing Administration Schedules and the list of special education students. For each student on both lists:

   A. Draw a line (pencil or pen) through name on Administration Schedule and write the page # and line # by name on special education list.

   B. If the student is in the HSTS sample (highlighted), put a check " " next to name on special education list.

   C. Count number of names with a " " on special education list. This should equal # both highlighted and lined through on Administration Schedule.

5. Prepare Transcript Request Form #2 (Special Education Students), listing names and information from special education list. If student was on NAEP Administration Schedule, record NAEP student ID, if any; SLF type; whether in HSTS sample ( ); and (if no NAEP ID), demographic information.

6. Prepare Transcript Request Form #1 (General Students) listing the HSTS sampled names (highlighted and not lined through) and information from NAEP Administration Schedules.

7. Identify Excluded Students. You will need:

   - School's original list of NAEP eligibles (SLF's A, B, C or Computer list).
   - Roster of Questionnaires.
   - Transcript Request Form #3 (Excluded Students)

   A. Using line numbers listed on the Roster find and highlight names of Excluded Students on SLF-A, B, C.

   B. Compare highlighted names to TRF-2. If name appears on TRF-2, copy excluded student questionnaire number from Roster onto TRF-2.

   C. If name not on TRF-2, fill out TRF-3.

8. Check Roster to determine whether school needs to fill out School Characteristics and Policies Questionnaire.

9. Complete the Sampling Verification Worksheet, Part 1. Remember to write the PSU and School # on this form.

3rd Revision
10/14/87

SAMPLING CHECKLIST

1987 HIGH SCHOOL TRANSCRIPT STUDY

Schools WITHOUT NAEP Administration Schedules

You will need:

- Lists of eligible students from the school.
- Student Sampling Form from your school folder.
- Roster of Questionnaires (if it exists) from your school folder.
- Blank Transcript Request Forms 1 and 2 (TRF-1 & TRF-2).

1. Obtain lists of eligible students.

   A. SLF-D or other list: All students in 11th grade in Spring 1986.

   B. SLF-E or other list: All students with IEP's in Spring 1986 who were --

      - In 11th grade, Spring 1986, and/or
      - Born between October 1, 1968 and September 30, 1969.

2. Review lists for completeness and accuracy.

   A. Make sure all 11th grade special education students are on both lists.

   B. Only 11th graders should be on 11th grade list.

   C. Special education students listed should be grade and/or age eligible.

3. Select sample of 11th graders.

   A. Write a consecutive line number (beginning with 1) next to each student's name listed on 11th grade list (SLF-D).

   B. Compare total number listed to minimum and maximum on the Student Sampling Form (SSF). If out of range, call Westat at (800) 247-2973 or (800) 638-8985.

   C. Use line numbers listed on SSF to identify the HSTS sample on the 11th grade list, putting a check ( ) by the line number in the "Sel. Stud." (Selected Student) column of 11th grade list. (Ignore line # "0" if it appears on the SSF.)

D. Highlight the names of sampled students.

E. Verify: Number of students sampled (highlighted) - # of line numbers used from SSF.

4. Eliminate duplicates, comparing 11th grade list and list of special education students. For each student on both lists:

A. Draw a line (pencil or pen) through name on 11th grade list and write his/her line # from that list next to name on special education list.

B. If the student is in the HSTS 11th grade sample (i.e., name highlighted and " " in selected student column on 11th grade list), put a check mark next to his/her name on special education list.

C. Count number of names with a " " on special education list. This should equal # of names sampled (highlighted) but lined through on 11th grade list.

5. Prepare Transcript Request Form #2 (Special Education Students).

A. List all students from special education list onto TRF-2; and

B. Transfer all information onto TRF-2 for each student from the special education list.

6. Prepare Transcript Request Form #1 (General Students).

A. Looking at the 11th grade list, write on TRF-1 the names of students who were sampled (highlighted), but not lined through on the 11th grade list; and

B. Transfer all information for each student from 11th grade list onto TRF-1.

7. Complete the Sampling Verification Worksheet, Part 2. Remember to write the PSU and School # on this form.

8. Check Roster of Questionnaires. If school did not send in School Characteristics and Policies Questionnaires, ask them to fill one out.

PSU #: _____ ADDENDUM TO SCHOOL TRANSCRIPT Page ___ of ___

School #: _____ 1987 HIGH SCHOOL TRANSCRIPT STUDY

STUDENT ID#: _____

Use the space below to copy over course information not on the student's transcript and/or information illegible on the transcript.

Year in school	Course title	Course number	Special information	# of credits	Grade	WESTAT OFFICE USE ONLY

COMMENTS:

(Over for instructions)

INSTRUCTIONS FOR COMPLETING ADDENDUM TO SCHOOL TRANSCRIPT

Whenever you use an Addendum, record the ID numbers that match the Addendum to a transcript in the spaces indicated.

Use the Addendum for the following situations:

- The printed transcript is incomplete and you obtain the missing information from the student's records at the school or district. COMPLETE ALL COLUMNS FOR EACH COURSE BEING ADDED TO THE TRANSCRIPT.

- One or more items of information needed for each course does not appear on student transcripts at this school (or for groups of students at this school) AND it is not possible to record the information on the transcript. COMPLETE THE COURSE TITLE COLUMN AND THE APPROPRIATE COLUMN(S) CORRESPONDING TO THE ADDITIONAL INFORMATION.

- The best copy of the transcript that you can obtain contains illegible information or part of the information was cut off during copying. COPY THE TITLE OF THE AFFECTED COURSE(S) AND ALL THE ILLEGIBLE/MISSING INFORMATION FOR THE COURSE(S).

Use the columns on the Addendum as follows:

- Year in School – Enter either the school grade/level (i.e., 9, 10, 11, or 12) or the school year (i.e., 82-83, 83-84, 84-85, 85-86, or 86-87) if grade level is not available.

- Course title – Enter the title of the course exactly as it appears in the student's record.

- Course number – Enter the course number (if any), including section number where applicable, as it appears in the student's record.

- Special information – Use this column, and the appropriate codes, to indicate the following:

  SP Special Education only
  LM Language Other than English
  OC Off campus
  H Honors Course or Section
  R Remedial Course or Section

- Number of credits – Record the number of credits the student earned for the course. Be sure to enter the decimal point if partial credits were given.

- Grade – Enter the grade (e.g., A, A+, B, B-, C, 4.0, 2.5, .83, 83%, .75, 75%) the student earned/was given for the course.

PSU # _____

School # _____

Student ID # _____

OMB No.: 1850-0613

Expiration Date: 4/30/88

U.S. Department of Education
1987 High School Transcript Study

SPECIAL EDUCATION STUDENT QUESTIONNAIRE

During the 1987-88 school year, the 1987 High School Transcript Study (HSTS) is collecting high school transcripts of a sample of students in selected schools across the country. The sample of students includes a proportion of students with Individualized Educational Programs (IEPs). Student transcripts will be used to investigate the types of academic and vocational courses and resource services in which these special education students enroll during high school.

To obtain information on the characteristics and placements of special education students, we are asking you to complete this questionnaire for the identified student. None of the information collected will be released in a manner that would enable any school, teacher, or student, to be identified. HSTS is authorized under law 20 U.S.C. 1221e, Sec. 1232g. While your participation is voluntary, your responses to these questions are needed to make this survey accurate and complete.

Please answer directly on the questionnaire by circling the appropriate letter or number.

Thank you very much for your help.

CIRCLE ONE LETTER OR NUMBER FOR EACH QUESTION ON THIS PAGE.

1. This special education student is which of the following?

White (Not Hispanic)	W
Black (Not Hispanic)	B
Hispanic (Mexican, Mexican- American, Chicano, Puerto Rican, Cuban, Other Spanish or Hispanic descent)	H
Asian or Pacific Islander	A
American Indian or Alaskan Native	I
Other	O

2. This special education student is which of the following?

Male	1
Female	2

3. What instructional grade level in reading had this student achieved at the end of 1986-87?

No grade level determined	N
Lower than kindergarten	P
Kindergarten	K
Grade 1	1
Grade 2	2
Grade 3	3
Grade 4	4
Grade 5	5
Grade 6	6
Grade 7	7
Grade 8	8
Grade 9	9
Grade 10	10
Grade 11	11
Grade 12	12

4. What instructional grade level in mathematics had this student achieved at the end of 1986-87?

No grade level determined	N
Lower than kindergarten	P
Kindergarten	K
Grade 1	1
Grade 2	2
Grade 3	3
Grade 4	4
Grade 5	5
Grade 6	6
Grade 7	7
Grade 8	8
Grade 9	9
Grade 10	10
Grade 11	11
Grade 12	12

5. For purposes of P.L. 94-142 reporting, what is this student's primary disability? (Please refer to attached definitions if needed.)

Multihandicapped	1
Mentally retarded	2
Hard of hearing	3
Deaf	4
Speech-impaired	5
Visually handicapped/blind	6
Deaf/blind	7
Seriously emotionally disturbed	8
Orthopedically impaired	9
Learning disabled	10
Other health-impaired	11

(Specify) _____

6. Excluding lunch, how many periods of the school day did this student spend in the following settings in 1986-87? **(CIRCLE ONE NUMBER ON EACH LINE.)**

		NUMBER OF PERIODS IN 1986-87
A.	Mainstream classes with no special education support services	0 <1 1 2 3 4 5 6 7 8
B.	Mainstream classes with special education support services	0 <1 1 2 3 4 5 6 7 8
C.	Resource room	0 <1 1 2 3 4 5 6 7 8
D.	Self-contained/separate special education classroom	0 <1 1 2 3 4 5 6 7 8

7. How would you describe this student's limitations in each of the following areas? **(CIRCLE ONE NUMBER ON EACH LINE.)**

		SEVERE	MODERATE	MILD	NOT AFFECTED
A.	Physical	1	2	3	4
B.	Psychosocial (adaptive behavior)	1	2	3	4
C.	Cognitive (level of capacity to acquire knowledge and process information)	1	2	3	4

8. Did this student receive any of the following related services in 1986-87? **(CIRCLE ONE NUMBER ON EACH LINE.)**

		YES	NO
A.	Occupational therapy	1	2
B.	Physical therapy[1]	1	2
C.	Speech therapy	1	2
D.	Counselling[2]	1	2

---

[1] Adaptive physical education should <u>not</u> be considered as physical therapy. Physical therapy is a related service that is authorized under P.L. 94-142.

[2] "Counselling" refers to individual or group counselling provided by a school psychologist, social worker, guidance counselor or other specially trained personnel for the purposes of helping special students to remain in school and complete the objectives of the IEP. These are services beyond those which may be received by every student in school.

DEFINITIONS OF HANDICAPPING CONDITIONS

MULTIHANDICAPPED means concomitant impairments (such as mentally retarded/blind, mentally retarded/orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf/blind children.

MENTALLY RETARDED means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

HARD OF HEARING means a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance, but which is not included under the definition of "deaf" below.

DEAF means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

SPEECH IMPAIRED means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance.

VISUALLY HANDICAPPED means a visual impairment, which even with correction, adversely affects a child's educational performance. The term includes both partially seeing and BLIND children.

DEAF/BLIND means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special educational programs solely for deaf or blind children.

SERIOUSLY EMOTIONALLY DISTURBED (sometimes referred to as BEHAVIORALLY DISORDERED) is defined as follows:

(a) The term means a condition exhibiting one or more of the following characteristics, which adversely affect educational performance over a long period of time and to a marked degree.

An inability to learn which cannot be explained by intellectual, sensory, or health factors

An inability to build or maintain satisfactory interpersonal relationships with peers and teachers

Inappropriate types of behavior or feelings under normal circumstances

A general pervasive mood of unhappiness or depression

A tendency to develop physical symptoms or fears associated with personal or school problems

(b) The term includes children who are schizophrenic. The term does NOT include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

ORTHOPEDICALLY IMPAIRED means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by diseases (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, fractures or burns which cause contractures).

LEARNING DISABLED (SPECIFIC LEARNING DISABILITY) means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does NOT include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

OTHER HEALTH IMPAIRED means (1) having an autistic condition which is manifested by severe communication and other developmental and educational problems; or (2) having limited strength, vitality, or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

PSU # _____

School # _____

OMB No.: 18500-0813

Expiration Date: 4/30/88

U.S. DEPARTMENT OF EDUCATION
1987 HIGH SCHOOL TRANSCRIPT STUDY

SCHOOL CHARACTERISTICS AND POLICIES QUESTIONNAIRE

During the 1986-86 school year, a sample of students across the country were given a series of questions as part of the National Assessment of Educational Progress (NAEP). That assessment focused on achievement in mathematics, science, computer competence, reading, and United States literature and history. NAEP also investigated the relationship between students' achievement and various school, teacher, and home factors that could influence this achievement.

During the 1987-88 school year, an expanded sample in both the same schools and some new schools, including your school, are being asked to supply school records as part of the 1987 High School Transcript Study. This study will focus on patterns of course-taking in mathematics, science, English, social studies, foreign languages, and computers. It will also investigate the relationship between student course-taking patterns and various school factors. We are asking your school to complete this questionnaire about school factors. The first 32 questions should be completed by the principal or headmaster/mistress. The remaining questions may be filled out by another person in your school who is familiar with information about enrollment, facilities, curriculum, and staff development.

We realize that you are very busy. However, we urge you to complete the questionnaire as carefully as possible. None of the information will be released in a manner that would enable any school or student to be identified.

NAEP is authorized under law 20 USC 1221e, Sec. 1242. While your participation is voluntary, your responses to these questions are needed to make this survey accurate and complete.

Please answer directly on the questionnaire by circling the appropriate number or by writing your response in the space provided.

Thank you very much for your help.

Please return the completed questionnaire to the Westat Field Representative for your school or mail to Judy Thorne, Westat, 1650 Research Blvd., Rockville, MD 20850.

School Questionnaire

Circle one number for each question. Questions 1-32 should be completed by the principal or head of this school.

1. What is your sex?

   (1) Male
   (2) Female

2. Which best describes you?

   (1) White
   (2) Black
   (3) Hispanic (Mexican, Mexican American, Chicano, Puerto Rican, Cuban, or other Spanish or Hispanic background)
   (4) Asian or Pacific Islander
   (5) American Indian or Alaskan Native
   (6) Other

3. What is your age?

   |__|__|
   Number

4. Counting this year, how many years have you been principal or head of this school?

   |__|__|
   Number

5. Counting this year, how many total years of school administration experience do you have?

   |__|__|
   Number

6. How many years did you teach full-time prior to entering school administration?

   |__|__|
   Number

7. What is the highest academic degree you hold?

   (1) High school diploma
   (2) Associate degree/vocational certification
   (3) Bachelor's degree
   (4) Master's degree
   (5) Education specialist or professional diploma based on six years of college study
   (6) Doctorate

8. Do you have a master's degree and/or a doctorate in educational administration?

   (1) Yes
   (2) No

Questions 9-11. About how many semesters (or equivalent) of course work have you had at the graduate level in each of the following areas? Circle one number on each line.

		None	1-2	3-4	5-6	More than 6
9.	Teaching methods	1	2	3	4	5
10.	Classroom management	1	2	3	4	5
11.	Administration or management	1	2	3	4	5

Questions 12-25. For each of the following fields please answer Yes or No, indicating whether or not: (A) you had an undergraduate major or minor in that field, (B) you have taken courses in that field since you completed your bachelor's degree, (C) you have ever taught in that field.

		A. Undergraduate major or minor		B. Post-bachelor study		C. Taught	
		Yes	No	Yes	No	Yes	No
12.	Reading/ language arts	1	2	1	2	1	2
13.	English	1	2	1	2	1	2
14.	Mathematics	1	2	1	2	1	2
15.	Science	1	2	1	2	1	2
16.	Computer science	1	2	1	2	1	2
17.	Social studies	1	2	1	2	1	2
18.	History	1	2	1	2	1	2
19.	Foreign languages	1	2	1	2	1	2
20.	Art	1	2	1	2	1	2
21.	Music	1	2	1	2	1	2
22.	Industrial arts	1	2	1	2	1	2
23.	Business education	1	2	1	2	1	2
24.	Home economics	1	2	1	2	1	2
25.	Physical education	1	2	1	2	1	2

Please continue on next page.–>

Questions 26-32. Approximately how much of your time, including evenings, is spent on each of the following tasks during a typical week? Circle one number on each line.

		None	1-2 hrs.	3-4 hrs.	5-6 hrs.	7 or more hrs.
26.	Administration (budgeting, building management, recordkeeping, scheduling, etc.)	1	2	3	4	5
27.	Curriculum matters ...	1	2	3	4	5
28.	Teacher supervision	1	2	3	4	5
29.	Working with teachers (other than supervision)	1	2	3	4	5
30.	Discipline	1	2	3	4	5
31.	Working with students (other than discipline)	1	2	3	4	5
32.	Parent/ community relations	1	2	3	4	5

33. How long is the school day?

|__| plus |__|__|
(Hrs.) (Minutes)

34. During how much of the school day are students in classes of some kind? Exclude homeroom, lunch, recess, time spent changing classes, and study halls.

|__| plus |__|__|
(Hrs.) (Minutes)

35. What was your school's average daily attendance rate last year?

|__|__| %

36. On the average, what percentage of the students enrolled at the beginning of the school year are still enrolled at the end of the school year?

|__|__|__| %

37. What is the first step on an annual salary contract schedule for a beginning teacher with a bachelor's degree in your school district? Give either the amount OR the range. If your school is nonpublic, provide information about your school or local administrative unit. (Give the amount for 1985-86.)

$|__|__|__|__|__|
(Amount)

OR $|__|__|__|__|__| to $|__|__|__|__|__|
(Range)

Questions 38-51 ask about your school's teaching staff, that is, full-time staff who spend at least 75% of their time in a classroom providing instruction to students. Do not include teacher aides.

38. How many individuals are on the teaching staff?

|__|__|__|
(Number)

Questions 39-44. How many teachers teach each of the following subjects? How many of them have a specialist certification in the subject? If the state does not issue a specialist certification in a subject, check the box in the third column.

		Number teaching	Of those teaching, number certified in subject	State does not issue specialist certification for subject
39.	English	|__|__|	|__|__|	|_|
40.	Mathematics	|__|__|	|__|__|	|_|
41.	General science	|__|__|	|__|__|	|_|
42.	Biology	|__|__|	|__|__|	|_|
43.	Chemistry	|__|__|	|__|__|	|_|
44.	Physics	|__|__|	|__|__|	|_|

45. How many of the teaching staff are members of a minority group (Black, Hispanic, Asian, Pacific Islander, American Indian, or Alaskan Native)?

|__|__|__|
(Number)

Please continue on next page.–>

46. How many of the teaching staff are female?

|__|__|__|
(Number)

47. How many of the teaching staff have a degree beyond the bachelor's degree?

|__|__|__|
(Number)

48. On the average, how many of the teaching staff are absent on any given day in your school?

|__|__|
(Number)

Questions 49-51. What percentage of the teaching staff has taught in your school for each of the following periods of time? Total should equal 100%.

49.	Less than 3 years	|__|__|__| %
50.	3-9 years	|__|__|__| %
51.	10 years or more	|__|__|__| %
		100%

Questions 52-54. Who is primarily responsible for the following components of the formal teacher evaluation process (i.e., the regularly scheduled, structured review of each teacher's performance)? Circle one number on each line.

		Not done	Principal	Ass't. principal	Curriculum coord./ dept. chair	District personnel	Someone else
52.	Review of teacher's lesson plans	1	2	3	4	5	6
53.	Observation of teaching	1	2	3	4	5	6
54.	Conferences about teacher's performance	1	2	3	4	5	6

Questions 55-57. At what level is the decision made regarding selection of the core instructional materials in the following subjects? Circle one number on each line.

		Each teacher individually	A group of teachers	Curriculum coord./ dept. chair	Principal	School district	State
55.	English	1	2	3	4	5	6
56.	Mathematics	1	2	3	4	5	6
57.	Science	1	2	3	4	5	6

Questions 58-62 ask about practices in eleventh grade classes. If eleventh grade is not taught in your school check the box below and go to Question 63.

|__| Eleventh grade not taught in this school.

58. What is the major way your eleventh grade teaching staff is organized? (Exclude art, music, physical education, etc.)

(1) Self-contained class--one teacher teaches the same students all or a significant part of the day.

(2) Team-teaching--two or more teachers teach a group of students for all or a significant part of the day.

(3) Departmentalized situation--one teacher teaches several classes of different students.

Questions 59-62. Are eleventh graders assigned to classes by ability (so that some classes are higher in average ability than others) in any of the following subjects? Circle one number on each line.

		Yes	No
59.	English	1	2
60.	Mathematics	1	2
61.	Science	1	2
62.	Social studies/history	1	2

Questions 63-90 have been omitted.

Please continue on next page.-->

Questions 91-93. Does your school have the following kinds of science laboratory facilities? Circle one number on each line.

		Yes	No
91.	Science laboratory facilities at the back of one or more classrooms	1	2
92.	One or more general-purpose science laboratories	1	2
93.	One or more specialized science laboratories (e.g., for biology, chemistry)	1	2

Question 94 has been omitted.

Questions 95-97. Approximately what percentage of your students are in each of the following instructional programs? Percents should total 100%.

95. General program |__|__|__| %

96. Academic or college preparatory |__|__|__| %

97. Vocational or technical |__|__|__| %

100%

98. Approximately what percentage of your students will drop out of school before graduating?

|__|__| %

99. Approximately what percentage of your students will go on to a two-year college or vocational school after high school?

|__|__| %

100. Approximately what percentage of your students will go on to a four-year college, service academy, or university after high school?

|__|__| %

Questions 101-106. How many students in your school receive each of the following special services? Enter a number or zero on each line.

		Number
101.	Subsidized school lunch and nutrition program	|__|__|__|
102.	Remedial reading instruction	|__|__|__|
103.	Remedial mathematics instruction	|__|__|__|
104.	English as a second language instruction	|__|__|__|
105.	Special education for the handicapped	|__|__|__|
106.	Gifted and talented education	|__|__|__|

Questions 107-111. How many of the following types of specialists or aides work in your school? Enter a number or zero on each line. Use decimal numbers to indicate less than full-time equivalent staff.

		Number of full-time (or full-time equivalent) personnel
107.	Remedial reading specialists	|__|__| . |__|
108.	Remedial mathematics specialists	|__|__| . |__|
109.	Bilingual/English as a second language specialists	|__|__| . |__|
110.	Special education teachers	|__|__| . |__|
111.	Teacher aides	|__|__| . |__|

112. Which of the following is most typical for special education students in your school?

(1) Attend regular classes only

(2) Attend some special and some regular classes

(3) Attend special classes only

(4) There are no special education students in this school.

Please continue on next page.-->

Questions 113-115. Are the following programs available in your school for students who are not native English speakers? Circle one number on each line.

		Yes	No
113.	English language course designed for speakers of another language	1	2
114.	A course in reading and writing in a student's native language	1	2
115.	One or more courses (e.g., mathematics, science, social studies) taught in a student's native language	1	2

Questions 116-124 have been omitted.

Questions 125-128. Do the following practices for involving parents exist in your school? Circle one number on each line.

		Yes	No
125.	Parents notified after 2-3 days of unexcused absence	1	2
126.	Parents informed halfway through the grading period if grades are low	1	2
127.	Parents notified when student sent to the office the first time for disruptive behavior	1	2
128.	Regular parent/teacher conference held	1	2

129. What is the title of the person or persons who filled out this questionnaire? Circle all that apply.

	Yes
Principal	1
Headmaster/Headmistress	1
Vice Principal, Assistant Principal	1
Counselor	1
Curriculum Coordinator, Department Head	1
Teacher	1
Secretary	1
Other (Specify) _____	

Thank you for your cooperation.

Please return the completed questionnaire to the Westat Field Representative for your school or mail to Judy Thorne, Westat, 1650 Research Blvd, Rockville, MD 20850

SUMMARY OF SCHOOL INFORMATION
1987 High School Transcript Study

PSU #: _____ School Name: _____

School #: _____ Principal's Name: _____

Telephone #: (_____) _____

SECTION 1. BACKGROUND INFORMATION

Enter, if available on School Contact Form; otherwise ask school:

1.1 Who at the school should you contact to introduce yourself?

_____
(Name)

1.2 Who at the school will be your contact for:

a. Locating the NAEP lists? _____

b. In no-NAEP-list schools, obtaining a list of eligible students for sampling?

_____

c. Obtaining list of eligible handicapped, or special education students?*

_____

d. Obtaining transcripts:
For nonhandicapped students? _____
For handicapped students? _____

e. When should you contact the school? _____

* A "handicapped" or "special education" student in this study is defined as a student who was 17 or in the 11th grade during the 1986-86 school year and had an Individualized Educational Program (IEP) that guided the student's high school instruction in that year.

SECTION 2. SPECIAL PROCEDURES AND ARRANGEMENTS

2.1 **Review the District and School Contact Forms to ascertain whether there are any special procedures required to obtain transcripts in the school:**

- **For nonhandicapped students?**
- **For handicapped students?**

_____

_____

_____

_____

2.2 **If school requires parental permission, describe procedures required.**

_____

_____

_____

Will school use the Westat permission letters?

☐ **Yes: Type of letter:** _____ **# Required:** _____

☐ **No**

2.3 **Any other special arrangements?** _____

_____

_____

SECTION 3. AVAILABILITY OF NAEP LISTS

3.1 Does the school have all of the NAEP materials that are necessary for using the NAEP sample?

a. Student Listing Forms (SLF's) A, B, and C ☐ Yes ☐ No

b. Administration Schedules ☐ Yes ☐ No

3.2 If no to 3.1, did you draw a new sample of nonhandicapped students?

☐ Yes ☐ No

3.3 Summarize any special sampling procedures that were discussed with your Field Supervisor and used for this school:

SECTION 4. COURSE DESCRIPTIONS

4.1 Were you given a course catalog with course descriptions as part of your materials for the school?

|_| Yes (4.2) |_| No (4.3)

4.2 If yes, obtain the information required on the COURSE CATALOG/TRANSCRIPT CHECKLIST, Sections A and B.

4.3 If no, request a course catalog, then review it using the PROJECT CHECKLIST.

4.4 Make sure your course catalogs are complete and are the most accurate for this school and graduating class by asking:

a. Is this catalog specifically for this school or for other schools as well (e.g., the entire district) ?

|_| This School |_| Other schools as well

IF FOR OTHER SCHOOLS AS WELL: Which, if any of the courses in this catalog are not available to students of this school? [Mark an "X" through those course titles and descriptions in the catalog.]

b. Does this catalog contain the courses for all four grades (9 through 12)?

|_| Yes

|_| No -- Obtain other catalogs

c. Does this catalog contain all of the courses taken by students of this school -- courses of the following types:

- special education courses?

  |_| Yes

  |_| No - Obtain special education catalogs

- vocational education courses?

  |_| Yes

  |_| No - Obtain vocational education catalogs, especially for area vocational/technical centers

d. Were other courses available to the class of 1987 while they were in this school? That is, are there some catalogs for earlier years that would be helpful to us in describing courses that were available then but are no longer in the current catalog?

|_| Yes -- obtain those catalogs

|_| No

4.5. What are the most common abbreviations of course titles the Westat coders will encounter on the transcripts and what do they stand for? (Write them here if there isn't room on the course catalog.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

4.6 If the course catalog includes course numbers, do those numbers appear on the transcripts and stand for the same courses?

|_| Yes |_| No

4.7. Are there other course numbers, suffixes, section numbers, letters, or other symbols that will appear on the transcripts?

|_| Yes |_| No

IF YES, do the section numbers or letters help to distinguish between different versions of the same course? (e.g., honors, remedial, special education, etc.)

|_| Yes |_| No

IF YES, write an explanation here or in the course catalog:

(NOTE: In some schools, teacher names indicate whether a course like English is regular or honors English. Determine whether this is the case in your school; if so, obtain teacher lists and note, in the catalog, what teachers are responsible for special sections like honors, remedial, etc.)

4.8 SPECIAL EDUCATION COURSES.

a. Review the special education course descriptions with your special education contact for the school. Note beside each course which of the following categorizes best describes it:

SP-a section of a regular course that is limited to special education students

SP-b life skills/functional course

SP-c special services/resource course

b. Are there courses in the catalog (or on the transcript) with the term "Resource" in the title that are NOT special education courses?

|_| Yes |_| No

IF YES, be sure that you do NOT mark those courses "SP."

4.9 LOCATION OF COURSES. Are all courses students can take offered on campus, and only on campus, at the home high school?

|_| Yes (skip to REMEDIAL AND HONORS COURSES, below)

|_| No

For each course that is offered off campus, note in the course catalog its location, using the following codes:

Loc-1 Area vocational/technical center

Loc-2 Special education center

Loc-3 Off campus, at another location

Loc-4 Multiple locations, can include "On Campus" along with other locations.

EXAMPLE: if auto repair is offered on campus, at the area vocational center, and at the special education center, you would mark it "Loc-4".

4.10 REMEDIAL AND HONORS COURSES.

a. Does the school have any courses that are considered remedial courses?

☐ Yes ☐ No

b. Does the school have any courses that are considered honors courses? (Honors does not include "Advanced Placement" because Westat has a different way of coding those courses.)

☐ Yes ☐ No

IF YES TO EITHER OF THE PRECEDING 2 QUESTIONS, note in the catalog those courses (or sections of courses) that are considered remedial (REM) or honors (HON) courses.

4.11 LM COURSES (COURSES IN A LANGUAGE OTHER THAN ENGLISH). Can the students of this school take any courses that are taught partially or wholly in a language other than English?

☐ Yes ☐ No

IF YES, note those courses in the catalog, using the code "LM."

SECTION 5. STRUCTURE OF THE SCHOOL DAY

5.1 A "typical" 11th grade student has _____ (#) class periods a day, not counting lunch or study hall.

5.2 The maximum number of class periods a student in this school may take each day is _____.

5.3 The minimum number of class periods a student may take each day is _____.

5.4 The typical class period lasts how many minutes? _____

SECTION 6. CREDITS

6.1 DEFINING A "CREDIT". How many credits would a student in this school earn for a course that consisted of a single class period, lasting the whole school year? _____

(Expected answers are 1, 2, 3, 4, or 10 credits. If the response is another number, make sure you have understood correctly.)

6.2 Is a "credit" for special education students defined the same as above?

- ☐ Yes
- ☐ No; explain any differences in definitions of credits:

_____

_____

_____

_____

SECTION 7. UNDERSTANDING THE TRANSCRIPTS

7.1 How can Westat coders identify special education courses on the transcripts?

_____

_____

_____

7.2 How can Westat coders identify courses that are taught in a language other than English on the transcripts?

_____

_____

_____

7.3 Grades on Transcripts.

a. What grading system is used on the transcripts? (A, B, C, etc.; numbers, other)?

_____

_____

b. If not the typical "A, B, C" system, describe the system by indicating the possible grades from highest to lowest.

(e.g.: "E,S,Y,N";
"100, 90,....10,0";
"8,7,6,5,4,3,2,1")

_____

_____

_____

_____

c. Is the same grading system used for special education students?

☐ Yes ☐ No

If not, explain the system that is used:

_____

_____

SECTION 8. GRADUATION REQUIREMENTS

8.1 Check here if graduation requirements are specified elsewhere and describe where they are:

|_|

Graduation Requirements are in: _____

OTHERWISE, COMPLETE QUESTIONS 8.2 THROUGH 8.7.

8.2a. What are the total credits needed to graduate with a "basic" diploma (not honors, voc. ed., etc.)?_____

8.2b. What are the graduation requirements: (list of subjects below)

English/Language Arts: _____

Math: _____

Computer Science: _____

Social Studies/History: _____

Science: _____

Foreign Language: _____

Physical Education: _____

Other (Specify): _____

8.3 Notes on options that will satisfy the requirements? (e.g., 1 credit of fine arts will substitute for 1 credit of computer science) _____

_____

8.4 Are there other kinds of diplomas available? If yes, how do the requirements vary?

_____

8.5 Do these requirements apply to 4 years of high school? |_| Yes |_| No, specify _____

8.6 What is the total number of credits required for students completing a vocational program?_____

_____

8.7 Are there grade requirements for graduation? If so, what? _____

_____

8.8 Is there a state or district competency test that is required for graduation?

_____

PSU #: _____

School #: _____

STUDENT ID#: _____

ADDENDUM TO SCHOOL TRANSCRIPT

1987 HIGH SCHOOL TRANSCRIPT STUDY

Use the space below to copy over course information not on the student's transcript and/or information illegible on the transcript.

Year in school	Course title	Course number	Special information	# of credits	Grade	WESTAT OFFICE USE ONLY

COMMENTS:

(Over for instructions)

INSTRUCTIONS FOR COMPLETING ADDENDUM TO SCHOOL TRANSCRIPT

Whenever you use an Addendum, record the ID numbers that match the Addendum to a transcript in the spaces indicated.

Use the Addendum for the following situations:

- The printed transcript is incomplete and you obtain the missing information from the student's records at the school or district. COMPLETE ALL COLUMNS FOR EACH COURSE BEING ADDED TO THE TRANSCRIPT.

- One or more items of information needed for each course does not appear on student transcripts at this school (or for groups of students at this school) AND it is not possible to record the information on the transcript. COMPLETE THE COURSE TITLE COLUMN AND THE APPROPRIATE COLUMN(S) CORRESPONDING TO THE ADDITIONAL INFORMATION.

- The best copy of the transcript that you can obtain contains illegible information or part of the information was cut off during copying. COPY THE TITLE OF THE AFFECTED COURSE(S) AND ALL THE ILLEGIBLE/MISSING INFORMATION FOR THE COURSE(S).

Use the columns on the Addendum as follows:

- Year in School – Enter either the school grade/level (i.e., 9, 10, 11, or 12) or the school year (i.e., 82-83, 83-84, 84-85, 85-86, or 86-87) if grade level is not available.

- Course title – Enter the title of the course exactly as it appears in the student's record.

- Course number – Enter the course number (if any), including section number where applicable, as it appears in the student's record.

- Special Information – Use this column, and the appropriate codes, to indicate the following:

  SP Special Education only
  LM Language Other than English
  OC Off campus
  H Honors Course or Section
  R Remedial Course or Section

- Number of credits – Record the number of credits the student earned for the course. Be sure to enter the decimal point if partial credits were given.

- Grade – Enter the grade (e.g., A, A+, B, B-, C, 4.0, 2.5, .83, 83%, .75, 75%) the student earned/was given for the course.

PROJECT CHECKLIST
1987 High School Transcript Study

PSU #: _____ School Name: _____

School #: _____

INSTRUCTIONS: Review the course catalog and transcripts for information listed in this form. If the required information is not included in the course catalog, it should be obtained from the study's school coordinator, the school secretary, or a source identified by you or your Field Supervisor.

SECTION A. COMPREHENSIVENESS OF SCHOOL COURSE CATALOG

A1. Does the course catalog(s) contain descriptions of the courses?

____ Yes

____ No (The items below should refer to the set of transcripts for the school, rather than to the course catalog.)

A2. Check here if the catalog contains only the courses that the class of 1987 could take. (You may have to cross out some courses) ..... |__|

A3. Check here if the catalog includes courses for all four high school grades (9 - 12) or if you have obtained catalogs for all four years ..... |__|

(If the catalog for this school does not include the courses for all four high school grades (9 - 12), obtain catalogs or course descriptions for courses students completed in the missing grades (at junior high schools in the district).)

A4. Check here if all applicable course catalogs have been obtained and are included in the package that goes to Westat ..... |__|

This includes:

- all types of courses (regular, vocational, special education);
- all grade levels (9 through 12);
- all course locations (on campus, off campus);
- course lists for previous years, if necessary and available.

HOW MANY SEPARATE LISTS ARE INCLUDED? _____

SECTION B. ADDITIONAL INFORMATION TO BE OBTAINED ON COURSE LISTS

B1. Explanation of abbreviations used in the course list or likely to be encountered on the transcripts ..... |__|

B2. Explanation of school course or section numbering systems, if numbers appear in the catalog and can be matched with numbers on the transcripts ..... |__|

(Obtain from the school coordinator an explanation of course numbering system, including any meaningful prefixes and suffixes or special numbers used for special education courses.)

B3. SPECIAL EDUCATION COURSES. The catalog indicates, or notation ("SP") has been made of, which courses are for special education students only ..... |__|

B4. Each special education course has been identified with one of the codes below ..... |__|

SP-a section of a regular course that is limited to special education students

SP-b life skills/functional course

SP-c special services/resource course

(For definitions, see Glossary of the Field Rep Training Manual.)

B5. LOCATION OF COURSES. Check here if all courses students can take are offered only on campus at the home high school ..... |__|

If the above is not checked, notation has been made, in the course catalog, next to each course which is offered off campus, according to the codes below ..... |__|

Loc-1 Area vocational/technical center

Loc-2 Special education center

Loc-3 Off campus, at another location

Loc-4 Location varies, any combination of the above and/or "On Campus"

EXAMPLE: if auto repair is offered on campus, at the area vocational center, and at the special education center, you would mark it "Loc-4".

B6. REMEDIAL AND HONORS COURSES. The catalog indicates, or notation ("REM" and "HON") has been made of, which courses or sections are considered remedial or honors courses ..... |__|

HSTS - SHIPPING TRANSMITTAL FORM

INSTRUCTIONS: FILL OUT FOR EACH SCHOOL AND SHIPMENT.

PSU #: _____ Field Representative: _____

School #: _____ School Name: _____

Date Shipped: _____ SOURCE OF NON-HANDICAPPED SAMPLE: ☐ NAEP LISTS

☐ NEW LIST (SLF-D)

1. TRANSCRIPTS - NON-HANDICAPPED STUDENTS
   1) Total No. Expected: _____
   2) No. in This Shipment: _____
   3) No. Unavailable: _____

2. TRANSCRIPTS - HANDICAPPED STUDENTS
   1) Total No. Expected: _____
   2) No. in This Shipment: _____
   3) No. Unavailable: _____

3. SPECIAL EDUCATION STUDENT QUESTIONNAIRES
   1) Total No. in Sample: _____
   2) No. in This Shipment: _____
   3) No. Unavailable: _____

4. ANNOTATED COURSE LIST(S)

   ☐ In This Shipment ☐ To Be Sent ☐ Shipped Previously

5. IS SCHOOL CHARACTERISTICS AND POLICIES QUESTIONNAIRES REQUIRED? (See Student Sampling Form):
   ☐ No, not required
   ☐ Yes, and included in this shipment
   ☐ Yes, but not included because: _____

Copies: White - Westat Yellow - Supervisor Pink - Field Rep.

1987 HIGH SCHOOL TRANSCRIPT STUDY
Transcript Reimbursement Form

School Name: _____

Mailing Address: _____

City, State: _____ Zip Code: _____

Number of transcripts: _____ @ $_____ = $_____

_____ _____
Signature of Registrar or Admissions Officer Date

Please return all copies of this form. One copy will be returned to you with your payment.

SEND TO: Westat, Inc. -- Attention: Helen Price
1650 Research Boulevard
Rockville, Maryland 20850

- -

FOR WESTAT USE ONLY

Charge: 958405 Check #: _____ Date: _____

Approved by: _____ Date: _____ Amount $_____

White: to Accounting; Yellow: to Project; Pink: to School

APPENDIX D

MODIFICATIONS TO THE CLASSIFICATION OF SECONDARY SCHOOL COURSES (CSSC)

I. Revisions and Additions to the Classification of Secondary School Courses

II. Special Education Course Classification and Coding System

Modifications were developed by:

Policy Studies Associates
1718 Connecticut Avenue, NW
Washington, DC 20009
Becky J. Hayward, Project Director

and

Westat, Inc.
1650 Research Boulevard
Rockville, Maryland 20850
Judy M. Thorne, Project Director

This work was supported by:

1987 High School Transcript Study
National Center for Education Statistics
U.S. Department of Education
Andrew Kolstad, Project Officer

Vocational Education
Support and Analysis Center, Task 5
National Assessment of Vocational Education
U.S. Department of Education
Dorothy Shuler, Project Officer

Revisions and Additions to the
Classification of Secondary School Courses (CSSC)

01. AGRIBUSINESS AND AGRICULTURAL PRODUCTION

01.01 AGRICULTURAL BUSINESS & MANAGEMENT

01.0171 Agricultural Cooperatives
Agricultural Cooperative Education I

01.0172 Agricultural Cooperative Education II

01.0182 SOEP - Supervised Occupational Experience Program

Agricultural related business operation - individual study

01.04 AGRICULTURAL PRODUCTS AND PROCESSING

01.0411 Agricultural Products and Processing I

preparation of meat, dairy, poultry and produce for market, as well as aspects of quality control and marketing

01.0412 Agricultural Products and Processing II

01.0421 Agricultural Products and Processing - Cooperative Education

01.06 HORTICULTURE

01.0661 Horticulture Power Equipment Operation and Maintenance
Horticultural Mechanics I

01.0662 Horticultural Mechanics II
Horticultural Mechanics - Cooperative Education

02. AGRICULTURAL SCIENCES

02.02 ANIMAL SCIENCES

02.0262 Horseshoeing/Farrier Training

Proper use of farrier tools; operation and maintenance of a forge; leg and hoof anatomy

02.0271 Small Animal Production I

02.0272 Small Animal Production II
Small Animal Production - Cooperative Education

03. RENEWABLE NATURAL RESOURCES

03.02 CONSERVATION AND REGULATION

03.0212 Environmental Management I

management and protection of natural resources; balancing the demands of multiple use; crises responses; federal regulations

03.0213 Environmental Management II

03.0221 Environmental Management - Cooperative Education

03.05 FORESTRY AND RELATED SCIENCES

03.0521 Forestry - Work Experience
Forestry - Cooperative Education

03.07 MARINE MANAGEMENT AND OCEANOGRAPHY

03.0711 Marine Management/Oceanography I
Marine Technology I

entry level skills in marine management with opportunity to focus on areas including hatchery management, marine biology, marine construction, marine engineering, marine geology, oceanography, navigation, seamanship, water chemistry and water microbiology

03.0712 Marine Management/Oceanography II
Marine Technology II

05. AREA AND ETHNIC STUDIES

05.01 AREA STUDIES

05.0139 Pacific Rim Nations

all nations situated on the Pacific Ocean - geography, natural resources, people, cultures, trade patterns, political relations with neighbors

05.0140 Canadian Area Studies

study of Canada, past and present, political, social and economic factors, relations with the US and UK and other countries

06. BUSINESS AND MANAGEMENT

06.01 BUSINESS AND MANAGEMENT, GENERAL

06.0111 Business Introduction
Business Careers Overview

06.02 ACCOUNTING

06.0211 Accounting/Business Management

overview of careers in both of these fields and training in introductory related skills

06.03 BANKING AND FINANCE

06.0321 Real Estate Finance

concepts of real estate finance, fixed mortgages, adjustable rate mortgages, financing packages for real estate development primary and secondary market, lending institution qualifying buyers

06.0331 Consumer Lending

concepts of consumer finance and lending, buyer credit qualifications, interest rates, full disclosure of consumer credit histories, laws and regulations governing lending

07. BUSINESS AND OFFICE

07.01 ACCOUNTING, BOOKKEEPING, AND RELATED PROGRAMS

07.0121 Accounting I

basic accounting; accounting cycle; depreciation; accruals; accounting theory; debit and credit; computerized accounting and spreadsheet

07.0122 Accounting II

advanced accounting; business ownership; simulations; managerial accounting; partnership and corporate accounting; cost accounting; advanced computerized accounting and spreadsheet

07.0151 Recordkeeping I

business records procedures; financial transactions; petty cash; purchase cycle; small businesses; customer billing and sales systems; computerized recordkeeping

07.0152 Recordkeeping II

advanced business recordkeeping; journalizing; financial statements; payroll; advanced computerized recordkeeping

07.0153 Personal Recordkeeping (formerly 32.0101) Home Finance

personal bookkeeping skills, simple business records; personal finance

07.02 BANKING AND RELATED FINANCIAL PROGRAMS

07.0201 Banking & Financial Careers

overview and introductory skills in banking and related financial industry areas

07.0241 Bank Data Entry Occupations

07.0251 Banking and Financial Careers - Cooperative Education

07.03 BUSINESS DATA PROCESSING AND RELATED PROGRAMS

07.0351 Data Entry Operator I

07.0352 Data Entry Operator II

07.0371 Peripheral Computer Operator

laser, impact printer operation

07.04 OFFICE SUPERVISION AND MANAGEMENT

07.0413 Business English 3

07.0414 **Business English 4**

07.06 SECRETARIAL AND RELATED PROGRAMS

07.0613 **Speed Writing (formerly 32.0116)**
Shorthand for College; Notetaking; College Notehand

07.0643 **Word Processing III**
Advanced Word Processing Applications

07.0661 **Legal Office Procedures**
Legal Secretary

07.0662 **Court Reporter**

entry level skills for court reporting; legal and technical terms; English for court reporters; recordkeeping for court reporters; anatomy and medical terminology; jurisprudence; machine laboratory

07.0671 **Medical Office Procedures**
Medical Secretary

07.0681 **Legal/Medical Office Procedures**

combined course introducing both legal and medical office procedures

07.07 TYPING, GENERAL OFFICE, AND RELATED PROGRAMS

07.0731 **Office Procedures 1**
Automated Office I

07.0732 **Office Procedures 2**
Automated Office II

08. MARKETING AND DISTRIBUTION

08.01 APPAREL AND ACCESSORIES MARKETING

08.0131 **Fashion Merchandising - Cooperative Education I**

08.0132 **Fashion Merchandising - Cooperative Education II**

08.03 ENTREPRENEURSHIP

08.0321 **Junior Achievement**
Student-Operated Company

08.06 FOOD MARKETING

08.0611 **Food Marketing/Distribution Overview**

08.0612 **Grocery Management**
Wholesale/Retail Grocery Operation

supervisory skills; human relations; checkout management; store accounting; merchandising; scan operations; store maintenance; storeroom and backstock; ordering and receiving; grocery, meat, dairy, frozen food departments

08.0621 **Food Marketing - Cooperative Education I**

08.0622 **Food Marketing - Cooperative Education II**

08.07 GENERAL MARKETING

08.0781 **Telephone Service Representative**

entry level skills as telephone service representative; human relations; fielding customer inquiries and complaints; marketing telephone services; billing and collection

08.0782 **Telephone Directory Assistant**

entry level skills as telephone directory assistant, computerized directory procedures, telephone etiquette, human relations

08.0811 **Computer Sales Representative**

sales principles and training, introduction to computers and software, computer applications, time management, computer store management

08.09 HOSPITALITY AND RECREATION MARKETING

08.0911 **Orientation to Hospitality Careers**

introduction to the hospitality industry including hotels, motels, restaurants, convention services, food and beverage

08.0921 Hospitality Sales I

marketing hospitality services; human relations; customer concerns; organizing and managing events (banquets, conferences, sports events); record- keeping; advertising

08.0922 Hospitality Sales II

08.11 TRANSPORTATION AND TRAVEL MARKETING

08.0121 Entertainment Park/Tourism - Cooperative Education

customer relations and entertainment park service provision; meeting the public; crisis management; special needs groups; tour groups; special events - on site experience

09. COMMUNICATIONS

09.01 COMMUNICATIONS, GENERAL

09.0121 Intercultural Communications

how patterns of communication vary from culture to culture; problems that can arise in intercultural communication; ways of bridging cross-cultural communications gaps

09.06 RADIO/TELEVISION NEWS BROADCAST

09.0612 Careers in Radio/Television Broadcasting

introductory combination course including overview of both radio and television broadcasting and careers in those fields

09.08 SPECIAL LANGUAGES

09.0811 Sign Language I/Signing I

09.0812 Sign Language II/Signing II

09.0921 Braille Communications

09.0831 Cryptography

deciphering codes and secret characters, special encoded languages (Morse Code), special techniques for breaking codes, history of cryptography

10. COMMUNICATIONS TECHNOLOGIES

10.01 COMMUNICATION TECHNOLOGIES

10.0173 Television Production 3

10.0174 Television Production 4

10.0191 Radio/Television Production I

combined course in radio and television production techniques, including introduction to audio and visual recording equipment; program developing; mixing and editing

10.0192 Radio/Television Production II

intermediate level combined course in radio and television production techniques

11. COMPUTER AND INFORMATION SCIENCES

11.01 COMPUTER AND INFORMATION SCIENCES, GENERAL

11.0151 Artificial Intelligence

defining thought; history, principles and state of the art of machine-generated thought; future generations of computers; limits of potential; programming computers to "think"

11.02 COMPUTER PROGRAMMING

11.0213 Computer Programming III

advanced computer programming

11.0231 PASCAL, Introduction/PASCAL I

11.0232 Advanced PASCAL/PASCAL II

11.0141 BASIC, Introduction/BASIC I

11.0142 Advanced BASIC/BASIC II

11.0251 COBOL, Introduction/COBOL I

11.0252 Advanced COBOL/COBOL II

11.0261 LOGO, Introduction

11.0271 RPG Programming, Introduction

11.0313 Data Processing, Advanced
Data Processing, Internship

11.0321 Computer Programming - Cooperative Education

12. CONSUMER, PERSONAL AND MISCELLANEOUS SERVICES

12.01 DRYCLEANING AND LAUNDERING SERVICES

12.0111 Dry Cleaning I

12.0112 Dry Cleaning II

12.04 PERSONAL SERVICES

12.0411 Cosmetology/Esthetician

12.0414 Cosmetology - Cooperative Education I

12.0415 Cosmetology - Cooperative Education II

12.05 GENERAL SERVICES

12.0511 General Services Occupations I

overview of service occupations, including warehousing/laundry/building maintenance/grounds maintenance; exploratory entry-level job skills

12.0512 General Services Occupations II

12.0513 General Services Occupations III

12.0514 General Services Occupations IV

12.0521 Building & Grounds Maintenance Occupations I

introduction to combined areas of building and grounds maintenance

12.0522 Building & Grounds Maintenance Occupations II

12.0523 **Building & Grounds Maintenance Occupations III**

14. ENGINEERING

14.01 ENGINEERING, GENERAL

14.0111 **Orientation to Engineering, Pre-Engineering**

overview of math, science, and technical skills needed for pursuing careers in engineering

14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL

14.0211 **Aerospace Materials**

14.0221 **Aerospace Engineering Design**

14.04 ARCHITECTURAL ENGINEERING

14.0411 **Strength of Materials - Architectural**

14.12 ENGINEERING RELATED

14.1211 **Instrumentation Physics I**

principles of pneumatic, hydraulic, electronic, and mechanically operated devices

14.1212 **Instrumentation Physics II**

14.1213 **Instrumentation Physics III**

14.1214 **Instrumentation Physics IV/Advanced Placement**

14.19 MECHANICAL ENGINEERING

14.1911 **Strength of Materials - Mechanical Technology**

stress and strain analysis, both elastic and plastic, with emphasis on resistance and equilibrium of force systems, elastic analysis of axially loaded members, connectors, beams and columns

14.20 METALLURGICAL ENGINEERING

14.2011 **Metallurgy/Powder Metal Basics**

properties, testing and inspection of basic metals

14.26 SURVEYING AND MAPPING SERVICES

14.2611 **Cartography**

the art of map making; types of projections; topographic notation; history of mapping techniques; translating satellite photography into maps

15. ENGINEERING AND ENGINEERING-RELATED TECHNOLOGIES

15.01 ARCHITECTURAL TECHNOLOGIES

15.0111 **Structural Engineering Technician**

fundamentals of math, drafting and architectural problem-solving; job-oriented instruction in design-drafting, structural stability, strength of materials, structural components and other technical aspects of constructing bridges, high-rise buildings, and other structures

15.02 CIVIL TECHNOLOGIES

15.0221 **Civil Engineering Technologies**

fundamentals of math, drafting and engineering problem-solving; job oriented instruction including design-drafting, surveying, computations; materials inspection, modeling and mapping for road construction, residential subdivisions, shopping centers, dams, airports, and other large projects

15.03 ELECTRICAL AND ELECTRONIC TECHNOLOGIES

15.0333 **Electronics Fabrication**

design, assembly, and trouble-shooting microcomputer interface circuits

15.0341 Electrical/Electronics Engineering Technician

combined course in both electrical and electronic engineering technologies preparing students to design and draft electrical and electronic circuitry, development and testing of equipment and specifications writing

15.04 ELECTROMECHANICAL INSTRUMENTATION AND MAINTENANCE

15.0411 Electromechanical Technology I

design and development of electromechnical devices and systems; plant automation; automation control systems; servomechanisms; robotics

15.0412 Electromechanical Technology II

15.0431 Computer-Assisted Design/Drafting (CAD)

use of the computer in drafting and design

15.05 ENVIRONMENTAL CONTROL TECHNOLOGIES

15.0511 Environmental Control Technologies

application of scientific principles to temperature and humidity control; design of heating and cooling systems; pollution and corrosion control; alternative energy applications and energy-conscious design

15.06 INDUSTRIAL PRODUCTION TECHNOLOGIES

15.0601 Industrial Research & Development
Product Creation/Improvement

industrial/production problem solving; applied creativity; inventions

15.0611 Industrial Production Technology I
Manufacturing Process Technology I

15.0612 Industrial Production Technology II
Manufacturing Process Technology II

15.08 MECHANICAL AND RELATED TECHNOLOGIES

15.0811 **Automotive Design & Technology**

fundamentals of automotive design; use of the computer; principles of aerodynamics; fuel efficiency

15.0821 **Mechanical Engineering Technology**

introduction to careers and skills in engineering technology; slide rule application to problem solving; programming digital computers using BASIC; developing programs to solve engineering problems

16. FOREIGN LANGUAGES

16.01 FOREIGN LANGUAGES, MULTIPLE EMPHASIS

16.0125 **Transitional English**

brush-up instruction to enable student to make the transition to regular English classes

16.02 AFRICAN (NON-SEMETIC) LANGUAGES

16.0221 **Amharic 1 (Ethiopian)**

16.0222 **Amharic 2**

16.03 ASIATIC LANGUAGES

16.0314 **Cantonese 4**

16.0336 **Foreign Language Contract - Japanese Independent Study**

16.04 BALTO-SLAVIC LANGUAGES

16.0451 **Finnish 1**

16.0452 **Finnish 2**

16.0453 **Finnish 3**

16.0454 **Finnish 4**

16.06 GREEK

16.0622 **Modern Greek 2**

16.0623 **Modern Greek 3**

16.0624 **Modern Greek 4**

16.0631 Classical Greek 1

16.0632 Classical Greek 2

16.0633 Classical Greek 3

16.0634 Classical Greek 4

16.11 SEMITIC LANGUAGES

16.1115 Arabic 1

16.1116 Arabic 2

16.1117 Arabic 3

16.1118 Arabic 4

16.1119 Foreign Language Contract - Arabic Independent Study

16.12 INDO-EUROPEAN LANGUAGES, OTHER

16.1211 Turkish 1

16.1212 Turkish 2

16.13 NONENGLISH LANGUAGES FOR NATIVE SPEAKERS

16.1311 Spanish for Native Speakers 1

16.1312 Spanish for Native Speakers 2

16.1313 Spanish for Native Speakers 3

16.1314 Spanish for Native Speakers 4

16.1315 Spanish for Native Speakers 5/AP

16.1321 Portuguese for Native Speakers 1

16.1322 Portuguese for Native Speakers 2

16.1323 Portuguese for Native Speakers 3

16.1324 Portuguese for Native Speakers 4

16.1331 Italian for Native Speakers 1

16.1332 Italian for Native Speakers 2

16.1333 Italian for Native Speakers 3

16.1341 Japanese for Native Speakers 1

16.1342 Japanese for Native Speakers 2

16.1343 Japanese for Native Speakers 3

16.1351 Chinese for Native Speakers 1

16.1352 Chinese for Native Speakers 2

16.1353 Chinese for Native Speakers 3

17. ALLIED HEALTH

17.02 DIAGNOSTIC AND TREATMENT SERVICES

17.0211 First Aid
CPR and First Aid
Emergency Medical Technician

17.0221 EKG Technician

principles of operations and administration of electrocardiograms; patient vital signs; interpretation of EKG readings; troubleshooting

17.04 MENTAL HEALTH/HUMAN SERVICES

17.0431 Mental Health Worker
Psychiatric Aide

entry-level training in mental health assistance; theories of mental and emotional disorders; basic non-professional crisis intervention; behavior management

17.05 MISCELLANEOUS ALLIED HEALTH SERVICES

17.0522 Central Service Technician

equipment decontamination, packing, sterilizing, storage and distribution of medical equipment and supplies

17.0592 Health Occupations - Cooperative Education I

17.0593 Health Occupations - Cooperative Education II

17.02 OPHTHALMIC SERVICES

17.0711 Optical Services Assistant

entry-level training to assist optometrist in vision examinations; care and use of glasses and contact lenses; assistance in frame selection; adjustment and repair of glasses

18. HEALTH SCIENCES

18.14 PHARMACY

18.1411 Pharmacy Technician

training to assist in pharmacy operation; mixing and dispensing prescribed medicines; compound preparation; procurement, storage, and issuance of pharmaceutical materials and supplies

18.18 PRE-MEDICINE

18.1801 Medical Ethics

study of current ethical issues in medicine including terminal patient care, euthanasia, Nobel Laureate sperm banking, patenting bio-genetic organisms

20. VOCATIONAL HOME ECONOMICS

20.01 CONSUMER AND HOMEMAKING HOME ECONOMICS

20.0126 Current Issues in Child Development

including the special needs child (gifted/handicapped); coping with divorce; the single-parent home; Latch-key children; coping with death and dying; child abuse

20.0188 Nutrition/Fitness Foods

20.0193 Home Economics - Cooperative Education I

20.0194 Home Economics - Cooperative Education II

20.02 CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES

20.0251 **Teacher Aide/Elementary**

20.0252 **Teacher Aide/Secondary**

pre-vocational training in teacher assistance at the secondary level

20.0261 **Child Care - Cooperative Education I**

20.0262 **Child Care - Cooperative Education II**

20.03 CLOTHING, APPAREL, AND TEXTILES MANAGEMENT, PRODUCTION AND SERVICES

20.0314 **Clothing Occupations - Cooperative Education I**

20.0315 **Clothing Occupations - Cooperative Education II**

20.04 FOOD PRODUCTION, MANAGEMENT, AND SERVICES

20.0413 **Food Services/Restaurant Management**

coordination of food service activities; cost estimations; recordkeeping; personnel supervision; quality and service monitoring; dining room, bar, and banquet operations

20.05 HOME FURNISHING AND EQUIPMENT MANAGEMENT, PRODUCTION AND SERVICES

20.0571 **Home Service Assisting I**

20.0572 **Home Service Assisting II**

20.0573 **Home Service Asst - Cooperative Ed I**

20.0574 **Home Service Asst - Cooperative Ed II**

20.06 INSTITUTIONAL, HOME MANAGEMENT AND SUPPORTING SERVICES

20.0641 **Companion to the Aged**
Geriatrics I

20.0642 **Geriatrics II**
Senior Citizen Services Director

20.0643 **Geriatrics - Cooperative Education I**
20.0644 **Geriatrics - Cooperative Education II**

20.0671 **Institutional, Home Management Services - Cooperative Education**

21. INDUSTRIAL ARTS

21.01 INDUSTRIAL ARTS

21.0130 Electricity - Cooperative Education I

21.0131 Electricity - Cooperative Education II

21.0140 Electronics - Cooperative Education I

21.0141 Electronics - Cooperative Education II

21.0150 Electricity/Electronics - Cooperative Education I

21.0151 Electricity/Electronics - Cooperative Education II

23. LETTERS

23.01 ENGLISH, GENERAL

23.0136 **Biography/Autobiography**

23.0153 **Reading, Independent Study**
(Code Deleted - Changed to 23.1216)

23.0155 **Children's Literature & Fantasy**

study of C.S. Lewis; Tolkien. L'Engle, LeGuin, Bettleheim and other authors who write in this genre or about this genre

23.0156 **Vocational English**

general English instruction studied in relation to its practical application to specific vocational areas of study

23.03 COMPARATIVE LITERATURE

23.0321 **Latin American Authors/Literature**

plot; character; theme; setting; cultural perspective of literature written by Latin American authors; contrast with American and European literature

23.04 COMPOSITION

23.0411 Grammar 12
English SAT Preparation

23.0415 Word Study - Remedial (formerly 32.0115)

23.08 LITERATURE, ENGLISH

23.0871 Medieval Literature

Chaucer, Middle English texts, morality and miracle plays, exploration of sacred and profane literature

23.12 LANGUAGE ARTS, READING

23.1211 Reading Development 1 (formerly 32.0109)
Reading Improvement; Remedial Reading; Reading Skills; Chapter 1 Reading; Reading Fundamentals; Corrective Reading

instruction for students with reading difficulties; skill acquisition; reading techniques; below grade level remediation; word attack skills; comprehension

23.1212 Reading Development 2 (formerly 32.0110)

reading difficulties; continued skill building; student needs diagnosis; survival reading; critical thinking skills; study habits

23.1213 Reading Development 3

continued skill building; emphasis on individual deficiencies; functional literacy

23.1214 Reading Development 4

competency test reading; career reading skills

23.1215 Speed Reading (formerly 32.0111)

definition unchanged

23.1216 Reading, Independent Study (formerly 23.0153)

Advanced Reading & Study Skills
Reading and Conference; Literature, Individualized; Best Sellers; Reading for Pleasure

reading under contract; advanced reading skill development

23.13 LANGUAGE ARTS, BASIC SKILLS

23.1311 Functional English 1 (formerly 32.0118)
Correlated Language Arts 1

integrated language arts course designed to develop reading and writing skills; survival and job-oriented skills; emphasis on short reading selections, vocabulary from context, and writing paragraphs

23.1312 Functional English 2
Correlated Language Arts 2

study to improve reading and writing skills; mastery of survival skills; short stories and short composition; job applications; answering want ads; letters of complaint

23.1313 Functional English 3
Correlated Language Arts 3

study to improve reading and writing skills; provide mastery of job-oriented skills; usage, syntax, vocabulary building; five-paragraph essays; business letters

23.1314 Functional English 4 (formerly 32.0118)
Correlated Language Arts 4
Minimum Standards Review
Personal and Career Communications

remediation of deficiencies in reading, writing and survival/career skills; emphasis on grammar, essay development, reading and vocabulary development through literature; formal research paper; resumes and job hunting

24. LIBERAL/GENERAL STUDIES

24.01 LIBERAL/GENERAL STUDIES

24.0141 Gifted and Talented Program

academic/creative education for gifted students; enrichment-subject unspecified or broad range of subjects

26. LIFE SCIENCES

26.01 BIOLOGY, GENERAL

26.0121 Biology, Basic
Biology 1

26.0122 **Basic Biology 2**

second-level basic course in biology for students who need a more simplified approach

26.0131 Biology, General I

26.0132 **General Biology II**

second-level biology course for average or college track students

26.0141 Biology, Honors I
(delete "College Preparatory")

26.0142 Biology, Advanced
Honors Biology II
College Biology; Advanced Placement Biology

26.07 ZOOLOGY

26.0771 **Comparative Embryology**

history, concepts and basic scope of animal embryonic development; modes of reproduction

27. MATHEMATICS

27.01 MATHEMATICS, GENERAL

27.0105 Mathematics, Basic
(Code Deleted - Changed to 23.0601-23.0604)

27.0109 Mathematics in the Arts
Mathematics as a Liberal Art
History of Mathematics

27.0110 Mathematics, Vocational
Mathematics for Employment (formerly 32.0108)

definitions combined but otherwise unchanged

27.0112 Mathematics Review
SAT Mathematics
Senior Math

27.06 BASIC SKILLS MATH

27.0601 **Basic Math 1 (formerly 27.0105)**
Remedial Math 1
Math Fundamentals; Developmental Math

arithmetic review; real-life applications; fractions, decimals, and percents; competency test preparation

27.0602 **Basic Math 2 (formerly 27.0106 with F3)**
Remedial Math 2

27.0603 **Basic Math 3 (formerly 27.0107 with F3)**
Remedial Math 3

27.0604 **Basic Math 4**
Remedial Math 4

intensive competency test preparation; individualized problem solving; personal and job-related uses of arithmetic; remedial math for non-English speakers

28. MILITARY SCIENCE

28.01 AEROSPACE SCIENCE (AIR FORCE)

28.0114 **Aerospace Education 4**
Air Science 4

30. MULTI/INTERDISCIPLINARY STUDIES

30.01 BIOLOGICAL AND PHYSICAL SCIENCES

30.0112 **College Pre-Science Skills**

problem solving, lab techniques, scientific reading and writing; college preparatory skills and concepts

31. PARKS AND RECREATION

31.01 PARKS AND RECREATION, GENERAL

31.0121 Search and Rescue

instruction in wilderness search and rescue techniques; basic first aid; treatment for hypothermia; snow survival; avalanche rescue

31.02 OUTDOOR RECREATION

31.0211 Winter/Ski Resort Operation

entry-level skills in ski resort operation; equipment care and rental procedures; lift operation; food and beverage service; scheduling and reservations

32. BASIC SKILLS

32.01 BASIC SKILLS, CAREERS & EMPLOYMENT
(formerly "BASIC SKILLS, OTHER")

32.0101 Recordkeeping, Personal
(Code Deleted - Changed to 07.0153)

32.0108 Mathematics for Employment
(Code Deleted - Combined with 27.0110)

32.0109 Reading Development 1
(Code Deleted - Changed to 23.1211)

32.0110 Reading Development 2
(Code Deleted - Changed to 23.1212)

32.0111 Speed Reading
(Code Deleted - Changed to 23.1215)

32.0112 Speech Development
(Code Deleted - Changed to 56.9401.2)

32.0113 Language Developmental
(Code Deleted - Changed to 16.0125 for non-English speakers and 23.1311-1314 for remedial)

32.0114 Voice, Developmental
(Code Deleted - Changed to 56.9401.2)

32.0115 Word Study, Remedial
(Code Deleted - Changed to 23.0415)

32.0116 Speedwriting
(Code Deleted - Changed to 07.0613)

32.0117 Study Dynamics
(Code Deleted - Changed to 32.0211)

32.0118 English, Functional
(Code Deleted - Changed to 23.1311-23.1314)

32.0119 Contemporary Issues, Basic Skills
(Code Deleted - Changed to 45.1033)

32.0121 Off-Campus Vo Tech Training - Unspecified

32.02 BASIC SKILLS, GENERAL

32.0211 Study Dynamics (formerly 32.0117)

definition unchanged

32.0221 Test Taking

general preparation for state competency exams in math, science, English, reading, writing

33. CITIZENSHIP/CIVIC ACTIVITIES

33.01 CITIZENSHIP/CIVIC ACTIVITIES

33.0161 United States History, Remedial
(Code deleted - Use codes 45.0809 w/F3 or F2 as appropriate)

34. HEALTH-RELATED ACTIVITIES

34.01 HEALTH-RELATED ACTIVITIES

34.0122 Physical Education - Medically Excused

credit granted to a student who is excused from PE for medical reasons (non-handicapped)

34.0137 State Requirements

combination course that can include driver's education, sex education, drugs/alcohol/tobacco

34.0138 Modern Medical Issues

information that will enable students to become better health service consumers; medical practitioners; hospitals; health insurance; emergency response

35. INTERPERSONAL SKILLS

35.01 INTERPERSONAL SKILLS

35.0131 **Peer Counseling**

students serve as leaders with individuals or in peer counseling groups to work on problem solving, mutual support, values clarification, counseling, networking

36. LEISURE AND RECREATIONAL ACTIVITIES

36.01 LEISURE AND RECREATIONAL ACTIVITIES

36.0192 **Experiential Outdoor Education**

outdoor leadership training, using the urban community or wilderness as a classroom for various subject area instruction; includes programs like Outdoor School, Outward Bound

38. PHILOSOPHY AND RELIGION

38.02 RELIGION

38.0212 **Religion, Introduction**
Philosophy of Religion

study of religion as a human phenomenon; skills with which to study a religion; nature and practice of developing a personal faith

38.0215 **Protestantism, Foundations**

historical overview of the development of various sects of protestantism, beginning with the reformation; doctrine and practice of specific denominations

38.0216 **Religious Movements in America**

historical study of the development of various religious sects in America, 1700 through the present

38.0217 **Islam and the Koran**

Mohammed and the birth and development of Islam around the world; the seven pillars of Islam and the philosophy of the Koran; Shiites, Sunnites and modern fundamentalism; reactionary groups and world politics

40. PHYSICAL SCIENCES

40.06 GEOLOGICAL SCIENCES

40.0632 **Geology - Field Studies**

local/regional field study of geological formations

40.10 AEROSPACE SCIENCE

40.1011 **Aerospace Science**

study of air travel; basic principles of flight and evolution of flight technology

41. SCIENCE TECHNOLOGIES

41.02 NUCLEAR TECHNOLOGIES

41.0211 **Radioactivity**

causes and effects of radioactivity; fission and fusion reactions

42. PSYCHOLOGY

42.01 PSYCHOLOGY, GENERAL

42.0113 **Abnormal Psychology**

etiology of mental illness; criteria of abnormality; individual and social causes of psychopathology; treatment and personal adjustment

43. PROTECTIVE SERVICES

43.01 CRIMINAL JUSTICE

43.0111 **Law Enforcement**
Criminal Justice

43.03 SECURITY

43.0311 **Security Guard**

entry-level training to prepare students to become security guards, store detectives, or body guards in private industry; report writing; basic alarm systems; arrest procedures; law and court process; communications; employer-employee relations

45. SOCIAL SCIENCES

45.02 ANTHROPOLOGY

45.0241 **Cultural Anthropology**
Oral History Collection

45.06 ECONOMICS

45.0612 **International Economics**

study of international monetary and trade systems; global markets; developed and developing economies; interdependence and the multiplier effects of national economic crises

45.10 POLITICAL SCIENCE AND GOVERNMENT

45.1031 **Political Science and Government - Local/Regional Field Study**

visits to/internships with branches of local and regional government; seminars with leaders; historical siteseeing

45.1032 **Political Turmoil**

study of political crises brought about by anarchy; assassinations; civil wars; terrorism; border disputes

45.1033 **Contemporary Issues, Basic Skills**
(replaces code 32.0119 - definition unchanged)

45.11 SOCIOLOGY

45.1132 **The Poor in America**

history, politics, and economics of poverty in America; rural and urban poverty; social impact of poverty; efforts of alleviate poverty - successes and failures

46. CONSTRUCTION TRADE

46.01 BRICKMASONRY, STONEMASONRY, AND TILE SETTING

46.0113 **Masonry 3**

advanced training, pre-apprenticeship; work experience

46.0131 **Concrete Technician**

basic concrete technology; foundations, poured walls, footers, slabs, sidewalks, patchwork; stamped design; exposed aggregate

46.04 MISCELLANEOUS CONSTRUCTION TRADES

46.0411 **Building Construction 1**
Manufactured Housing Assembly

46.0413 **Building Construction 3**

advanced course, including task supervision, project management

46.0422 **Flooring Installation**

tools and techniques for installation of carpeting, vinyl, tile, and wood flooring

46.0451 **Building Construction - Cooperative Education I**

46.0452 **Building Construction - Cooperative Education II**

47. MECHANICS AND REPAIRERS

47.01 ELECTRICAL AND ELECTRONICS EQUIPMENT REPAIR

47.0124 **Telecommunications Technician**

installation and repair of telecommunications equipment, including telephones, 2-way radio, citizen's band radio, and cellular mobile equipment

47.0181 **Food Processing Machine Maintenance Technician**

installation and repair of food rocessing equipment

47.02 HEATING, AIR CONDITIONING AND REFRIGERATION MECHANICS

47.0213 **Air Conditioning, Refrigeration and Heating 3**

47.03 INDUSTRIAL EQUIPMENT MAINTENANCE

47.0331 **Industrial Maintenance Mechanics 1**

repair and maintenance of nonvehicular industrial equipment

47.0332 **Industrial Maintenance Mechanics 2**

47.0341 **Petroleum Drilling Equipment Operation and Maintenance 1**

47.0342 **Petroleum Drilling Equipment Operation and Maintenance 2**

oil pumps and auxiliary equipment; gauges, thermometers and regulators; geology; rigs, hoist cables, drilling equipment

47.0343 **Petroleum Drilling Equipment Operation and Maintenance 3**

47.04 MISCELLANEOUS MECHANICS AND REPAIRERS

47.0432 **Shoe Repair and Orthopedics 2**

47.0433 **Watch and Clock Repair**

cleaning, repair, and maintenance of watches and clocks; weight-operated, spring-driven, digital, and quartz

47.0434 **Bicycle Repair**

repair and maintenance of bicycles; frames and components; racing, touring, family, mountain, freestyle, and exercise

47.06 VEHICLE AND MOBILE EQUIPMENT MECHANICS AND REPAIRERS

47.0624 **Auto Mechanics - Cooperative Education 1**

47.0625 **Auto Mechanics - Cooperative Education 2**

47.0633 **Auto Body 3**

47.0673 **Aviation Powerplant 3**

47.0674 **Aviation Powerplant 4**

48. PRECISION PRODUCTION

48.02 GRAPHIC AND PRINTING COMMUNICATIONS

48.0214 **Commercial Art 3**
Advanced Commercial Art

portfolio preparation

48.0231 **Sign Painting 1**

48.0232 **Sign Painting 2**

intermediate-level instruction

48.0233 **Sign Painting 3**

advanced-level instruction

48.0261 **Copy Editing**

reviewing texts, documents, and graphic pieces for typographic errors, syntax, usage, alignment

48.04 PRECISION FOOD PRODUCTION

48.0411 **Meatcutting I**

48.0412 **Meatcutting II**

intermediate/advanced

48.05 PRECISION METAL WORK

48.0524 **Welding - Cooperative Education**

48.06 PRECISION WORK, ASSORTED MATERIALS

48.0621 **Space Age Plastics**

designing, molding and casting products with aerospace applications; principles of using plastics in the aerospace industry

49. TRANSPORTATION AND MATERIALS MOVING

49.01 AIR TRANSPORTATION

49.0121 Aviation Technology 1
Avionics Technology

49.0122 Aviation Technology 2

49.0123 Aviation Technology 3

49.0124 Aviation Technology 4

49.0131 Air Travel Service Occupations

reservation and ticketing; ramp and baggage handling service; food and beverage service; cleaning and maintenance of aircraft

49.0141 Aircraft Parts Management 1

49.0142 Aircraft Parts Management 2

49.02 VEHICLE AND EQUIPMENT OPERATION

49.0212 Tractor-Trailer Truck Driving

49.0213 Heavy Vehicle Operation/Earth Moving Equipment

49.0214 Bus Driver/Chauffeur

49.03 WATER TRANSPORTATION

49.0341 Aquatic Occupations
Marine Diving

hands-on training in areas such as frogman, salvage diver, scuba diver, repairman

49.04 TRANSPORTATION, GENERAL

49.0411 Introduction to Transportation
Transportation Technology I

study of various transportation systems for movement of people and materials; analysis in terms of land, sea, air, and aerospace vehicles; service system design; government control and regulation of transportation systems; ecological effects of transportation systems

49.0412 Transportation Technology II

in-depth study of two or more systems of transportation; individual study and research; new approaches to areas such as safety, design, economy of operation, service maintenance, and governmental control

49.0421 Transportation/Traffic Technician

installation, repair, and maintenance of traffic control devices; design of traffic control systems

50. VISUAL AND PERFORMING ARTS

50.01 VISUAL AND PERFORMING ARTS, GENERAL

50.0111 Aesthetics
Art/Music/Drama/Dance Survey

50.02 CRAFTS

50.0251 Jewelry 1

50.0252 Jewelry 2

50.0253 Jewelry 3

50.0254 Jewelry 4

50.0291 Printmaking 1

50.0292 Printmaking 2

50.07 FINE ARTS

50.0709 Art 2, Independent Study
Art Advanced Placement

50.08 GRAPHIC ARTS TECHNOLOGY

50.0811 Computer Graphics Design

use of the computer in creating advertisements, illustrations, videographics

50.09 MUSIC

50.0965 Music Theater
Mixed Ensembles (Instrumental/Vocal)

50.0967 **Music Laboratory, General Survey**

introduction to music, basic instruments; hands-on experience for nonperforming students

SPECIAL EDUCATION COURSE CLASSIFICATION AND CODING SYSTEM

The special education classification and coding system organizes secondary special education courses and services into five categories, as follows:

I. Subject Area Courses (Regular CSSC Series)

II. Adaptive Physical Education (CSSC 34 Series)

III. Academic Life Skills/Functional Curriculum (54 Series)

IV. Vocational Life Skills/Functional Curriculum (55 Series)

V. Special Services (56 Series)

Revised 9/25/87

OVERVIEW OF COURSE CATEGORIES IN THE SPECIAL EDUCATION
COURSE CLASSIFICATION/CODING SYSTEM

Subject Area Courses

School districts generally include courses in both regular and special education offerings that have the same name and generally the same course content. When such courses are limited to special education students, they have been coded using the regular CSSC six-digit code with a special education indicator (0 or 2) added as a seventh digit. Any course not so limited has a "1" as the seventh digit. This principle applies to courses listed in special education sections of course catalogues and to special sections of regular courses. It applies to vocational as well as academic courses and to courses offered in area or special vocational-technical centers as well as to those offered in the regular high school setting.

Adaptive Physical Education

The current CSSC code for adaptive physical education (PE) is 34.0121. When offered only to students with IEPs, the code is either 34.01210 or 34.01212, with the seventh digit indicating special education (0 or 2).

Adaptive physical education should not be confused with adapted physical education, which is a course for nonhandicapped students who have temporary physical conditions (e.g., broken arm, pregnancy) that may limit their range of physical activities.

Life Skills/Functional Curriculum

Students may take courses in the functional academic and functional vocational curricula for one, two, three, or four years. These courses may be subject specific or general. They are offered in a self-contained setting and follow a modified curriculum targeted specifically to moderately or severely handicapped students. The general procedure for classifying and coding courses in the functional academic or functional vocational curriculum included the following:

- First two digits: 54 or 55
- Third digit: unique subject area identifier
- Fourth Digit: specific course identifier
- Fifth digit: course sequence identifier
- Sixth digit: indication of whether or not the course was taken for credit

- Seventh digit: special education functional curriculum identifier of 0

Special/Resource Services

Categories of special/resource services include (1) general tutorial services, (2) study skills, (3) survival skills, and (4) subject area courses or services. Usually the transcripts of students enrolled in special/resource services include a combination of regular courses and special education courses. The general code for special services uses 56 as the first two digits. Each category of services indicates in the sixth digit whether the student has taken that course or service for credit or not, and all 56 courses include the seventh-digit special education-only indicator of 2. Academic subject area courses include the CSSC subject identifier as the third and fourth (and, as necessary, fifth) digits.

GENERAL PROCEDURES TO BE FOLLOWED IN CLASSIFYING
AND CODING SECONDARY SPECIAL EDUCATION COURSES AND SERVICES

A. Assignment of the First Two Digits: Codes for Identifying Life Skills/Functional Courses and Special Services

To avoid duplication with codes in the CSSC, special education courses and services are identified by new codes in the first two digits as follows:

54: academic life skills/functional courses

55: vocational life skills/functional courses

56: special/resource courses and services

B. Assignment of the Third, Fourth, and Fifth Digit

Each subject area in the functional academic and vocational curricula is assigned a third-digit identifier (e.g., 54.1 for math; 55.2 for agricultural occupations). The fourth digit identifies a distinct course in each subject area. The fifth digit identifies a curricular sequence, if applicable.

C. Assignment of the Sixth Digit

Students with IEPs may or may not receive academic credit for the special education courses in which they are enrolled. A sixth digit identifier of 1 is assigned whenever a course is eligible for academic credit whether or not credit was actually granted. A sixth digit identifier of 9 identifies those courses that were ineligible for academic credit:

D. Assignment of the Seventh Digit: Procedures for Indicating Special Education Courses and Services

The basic 6-digit CSSC coding system was revised by adding a seventh digit to identify all courses (and services) as regular or special education. Seventh-digit codes were assigned as follows:

1 denotes a regular (mainstream) course that may be taken by a student with an IEP either with or without special education support services (e.g., reduced class size, consultation, teacher aides)

0 or 2 denotes a course offered only to students with IEPs

Only students with IEPs may be enrolled in such courses; courses may be offered by the special education or vocational education departments; they may also be special sections of regular courses (e.g., general mathematics, carpentry) enrolling only students with IEPs.

All courses in the 54, and 55 series will have a "0" as the seventh digit to indicate that they are restricted to students with IEPs who are enrolled in a primarily functional curriculum. All courses in the 56 series will have a "2" as the seventh digit to indicate they are restricted to students with IEPs who are enrolled in a primarily resource curriculum. Courses in all other 2-digit series can theoretically be restricted to special education students (code = 0 or 2) or, more typically, be open to all students (code = 1).

LIST OF COURSE CODES

Subsequent sections of this document provide codes for courses in all categories except the regular subject area courses in which special education students are mainstreamed. Codes for regular CSSC courses have added the appropriate seventh digit to the regular CSSC code.

II. Health and Physical Education (34 Series)

34.0: HEALTH AND PHYSICAL EDUCATION

34.0121.0 ADAPTIVE PHYSICAL EDUCATION (MULTIHANDICAPPED): Non-regular program adapted for students with moderate to severe cognitive and physical handicaps

34.0129.0 Adaptive Physical Education (Multihandicapped); not for credit

34.0121.2: ADAPTIVE PHYSICAL EDUCATION: nonregular program; muscle imbalance; posture problems; breathing problems; motor disabilities; limited to students with IEPs

34.0129.2 Adaptive Physical Education; not for credit

NOTE: This category should not be confused with what is sometimes referred to as adapted physical education, which is a program for students without IEPs who have temporary physical conditions (e.g., broken arm, pregnancy) that may limit their range of activities in regular physical education courses.

- Seventh digit: special education functional curriculum identifier of 0

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GENERAL PROCEDURES TO BE FOLLOWED IN CLASSIFYING AND CODING SECONDARY SPECIAL EDUCATION COURSES AND SERVICES

A. Assignment of the First Two Digits: Codes for Identifying Life Skills/Functional Courses and Special Services

To avoid duplication with codes in the CSSC, special education courses and services are identified by new codes in the first two digits as follows:

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B. Assignment of the Third, Fourth, and Fifth Digit

Each subject area in the functional academic and vocational curricula is assigned a third-digit identifier (e.g., 54.1 for math; 55.2 for agricultural occupations). The fourth digit identifies a distinct course in each subject area. The fifth digit identifies a curricular sequence, if applicable.

C. Assignment of the Sixth Digit

Students with IEPs may or may not receive academic credit for the special education courses in which they are enrolled. A sixth digit identifier of 1 is assigned whenever a course is eligible for academic credit whether or not credit was actually granted. A sixth digit identifier of 9 identifies those courses that were ineligible for academic credit:

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AND CODING SECONDARY SPECIAL EDUCATION COURSES AND SERVICES

A. Assignment of the First Two Digits: Codes for Identifying Life Skills/Functional Courses and Special Services

To avoid duplication with codes in the CSSC, special education courses and services are identified by new codes in the first two digits as follows:

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B. Assignment of the Third, Fourth, and Fifth Digit

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C. Assignment of the Sixth Digit

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LIST OF COURSE CODES

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34.0121.2: ADAPTIVE PHYSICAL EDUCATION: nonregular program; muscle imbalance; posture problems; breathing problems; motor disabilities; limited to students with IEPs

34.0129.2 Adaptive Physical Education; not for credit

NOTE: This category should not be confused with what is sometimes referred to as <u>adapted</u> physical education, which is a program for students without IEPs who have temporary physical conditions (e.g., broken arm, pregnancy) that may limit their range of activities in regular physical education courses.

III. Academic Life Skills/Functional Curriculum (54 Series)

(All 54-series courses are limited to students with IEPs.)

54.1: FUNCTIONAL MATH

54.1001.0: GENERAL MATH SKILLS: applications for independent functioning; precomputation skills; time; money; fundamental mathematical processes

54.1009.0 Functional Math Skills, not for credit

54.1101.0 FUNCTIONAL CONSUMER MATH: budgeting; shopping; financial planning; taxes; loans

54.1109.0 Functional Consumer Math, not for credit

54.1201.0 FUNCTIONAL VOCATIONAL MATH: Calculation, measurement, job skills, practical shop uses, skill development

54.1209.0 Functional Vocational Math, not for credit

54.2 FUNCTIONAL ENGLISH

54.2011.0 FUNCTIONAL LANGUAGE ARTS I: provides a unified approach to instruction in speaking, reading, and writing

54.2019.0 Functional Language Arts I, not for credit

54.2021.0 FUNCTIONAL LANGUAGE ARTS II: level two of the above

54.2029.0 Functional Language Arts II, not for credit

54.2031.0 FUNCTIONAL LANGUAGE ARTS III: level three of the above

54.2039.0 Functional Language Arts III, not for credit

54.2041.0 FUNCTIONAL LANGUAGE ARTS IV: level four of the above

54.2049.0 Functional Language Arts IV, not for credit

54.2051.0 FUNCTIONAL VOCATIONAL ENGLISH: Communication skills, terminology, job and workplace applications, skill development

54.2059.0 Functional Vocational English, not for credit

54.2101.0 FUNCTIONAL READING: word recognition; reading vocabulary; reading signs; spelling; word attack skills

54.2109.0 Functional Reading, not for credit

54.2201.0 FUNCTIONAL ORAL COMMUNICATION: speaking intelligibly; listening and understanding; following directions

54.2209.0 Functional Oral Communication, not for credit

54.2301.0 FUNCTIONAL WRITING: basic sentence structure; spelling; personal and business letters; completing application forms; penmanship

54.2309.0 Functional Writing, not for credit

54.2401.0 FUNCTIONAL ACADEMICS: Individualized academic curriculum, study skills, specialized academic support (not specified elsewhere)

54.2409.0 Functional Academics, not for credit

54.3: FUNCTIONAL LIFE SKILLS

54.3001.0 ACTIVITIES OF DAILY AND FAMILY LIVING: functioning in the community; local transportation systems; budgeting; home and personal maintenance; family responsibilities

54.3009.0 Activities of Daily and Family Living, not for credit

54.3101.0 SOCIAL/BEHAVIORAL SKILLS: following accepted rules and standards; friendship; problem solving; self-control; personal interactions

54.3109.0 Social/Behavioral Skills, not for credit

54.3201.0 FUNCTIONAL LEISURE AND RECREATIONAL SKILLS: management of free time; team behavior; recreation skills; rules; preparation for activities; selection of appropriate attire; maintenance of equipment

54.3209.0 Functional Leisure and Recreational Skills, not for credit

54.3301.0 FUNCTIONAL HEALTH: principles of cleanliness and hygiene; sex education; proper diet; grooming; emergency procedures; medical care

54.3309.0 Functional Health, not for credit

54.3401.0 FUNCTIONAL TRANSITION SKILLS: planning for future independent living or employment; skills for adult living; should include a work readiness component

54.3409.0 Functional Transition Skills, not for credit

54.4001.0 FUNCTIONAL SCIENCE: science concepts applied to daily living; simplified science, using household chemicals; safety; the human body; caring for animals

54.4009.0 Functional Science, not for credit

54.4501.0 FUNCTIONAL SOCIAL STUDIES: simplified principles of social science; structure of local government and election process; community resources and agencies; local geography; finding addresses; and using public transportation

54.4509.0 Functional Social Studies, not for credit

54.9401.0 HANDICAPPED DEVELOPMENTAL SUPPORT SERVICES: gross and fine motor skills; visual perception development; eye-hand coordination

54.9409.0 Handicapped Developmental Support Services, not for credit

IV. Vocational Life Skills/Functional Curriculum (55 Series)

(All 55-series courses are limited to students with IEPs.)

55.1: CAREER PREPARATION/EXPLORATION

55.1001.0 GENERAL PREVOCATIONAL PREPARATION: classroom-based employability skills; job behaviors; safety; self-reliance

55.1009.0 General Prevocational Preparation, not for credit

55.0101.0 CAREER EXPLORATION: generalized job interests and aptitudes; manual dexterity and motor integration

55.0109.0 Career Exploration, not for credit

55.0201.0 GENERAL WORK-STUDY/EXPERIENCE: unpaid work at a work/community setting; work adjustment skills for independent functioning; off-campus vocational training, sheltered or nonsheltered

55.0209.0 General Work-Study/Experience, not for credit

55.0301.0 GENERAL WORK EXPERIENCE: paid employment in an off-campus work setting; may include on-the-job training

55.0309.0 General Work Experience, not for credit

55.0401.0 COMBINED VOCATIONAL/ACADEMIC PREPARATION: includes career exploration, pre-vocational skills, academic curriculum, social and survival skills

55.0409.0 Combined Vocational/Academic Preparation, not for credit

55.2: AGRICULTURE

55.1011.0 GENERAL AGRICULTURE I: practical experience with farm crops and animals; indoor plants; general farm work; FFA participation

55.1021.0 GENERAL AGRICULTURE II: continued practical experience with farm crops and animals; agricultural equipment maintenance; general farm work

55.1031.0 GENERAL AGRICULTURE III: practical study of soils; livestock; plants; farm mechanics; agricultural occupations

55.1111.0 ANIMAL CARE I: feeding; grooming; exercising small and large animals; animal production

55.1121.0 ANIMAL CARE II: small animal care and feeding; livestock production, principles of animal nutrition

55.1211.0 PLANT CARE I: plant propagation; irrigation and drainage; turf management; greenhouse work; harvesting

55.1221.0 PLANT CARE II: landscaping and gardening; turf management; greenhouse operation; pesticides; fungicides; insecticides

55.1311.0 AGRICULTURAL MECHANICS I: cleaning and maintenance of equipment; equipment storage

55.1321.0 AGRICULTURAL MECHANICS II: agricultural equipment use and maintenance; use of hand and power tools

55.1411.0 AGRICULTURAL WORK STUDY: unpaid practice and mastery of skills for agricultural occupations

55.1511.0 AGRICULTURAL WORK EXPERIENCE: paid on-the-job training in agricultural occupations

55.2: BUSINESS AND OFFICE

55.2011.0 GENERAL OFFICE PRACTICE I: basic typewriting and clerical activities; filing; collating; telephone answering

55.2021.0 GENERAL OFFICE PRACTICE II: office machine operations; office skill improvement; continued practice in typing, filing, collating; office reception

55.2031.0 GENERAL OFFICE PRACTICE III: office simulations; mail clerk; duplication clerk; receptionist; typist; improved business skills

55.2111.0 OFFICE MACHINES I: xeroxing; postage meters; calculators; paper cutting

55.2121.0 OFFICE MACHINES II: continued experience with office machine operations; duplicating machines; calculators; adding machines; transcribing machines

55.2211.0 BUSINESS WORK STUDY I: unpaid practice and mastery of clerical and business skills at a work station

55.2221.0 BUSINESS WORK STUDY II: continued unpaid practice and mastery of clerical and business skills at an on-campus or off-campus location

55.2311.0 BUSINESS WORK EXPERIENCE I: paid on-the-job training in clerical and business skills

55.2321.0 BUSINESS WORK EXPERIENCE II: continued paid on-the-job training in business and office skills

55.3 HEALTH OCCUPATIONS

55.3011.0 GENERAL HEALTH OCCUPATIONS I: health careers orientation; structure and function of body systems; hygiene practices; first aid; nursing assistance

55.3021.0 GENERAL HEALTH OCCUPATIONS II: health-related services; community services; medical terminology; health care principles

55.3031.0 GENERAL HEALTH OCCUPATIONS III: health occupations; health aide; nursing assistant; orderly; health care principles

55.3111.0 HEALTH OCCUPATIONS WORK STUDY I: unpaid practice and mastery of health services skills

55.3121.0 HEALTH OCCUPATIONS WORK STUDY II: continued unpaid practice and mastery of health services skills

55.3211.0 HEALTH OCCUPATIONS WORK EXPERIENCE I: paid on-the-job training in health occupations

55.3221.0 HEALTH OCCUPATIONS WORK EXPERIENCE II: continued paid on-the-job training in health occupations

55.4: HOME ECONOMICS

55.4011.0 GENERAL HOME ECONOMICS I: introductory course; practical arts education; food selection and storage; simple food preparation; clothing maintenance; basic homemaking skills

55.4021.0 GENERAL HOME ECONOMICS II: intermediate course; basic meal preparation; basic sewing techniques; family living; home maintenance

55.4031.0 GENERAL HOME ECONOMICS III: more advanced course; principles of nutrition and meal preparation; clothing and textiles; child development; consumer education

55.4111.0 CHILD DEVELOPMENT I: care of small children; dressing and feeding; safety; play; learning experiences for children

55.4121.0 CHILD DEVELOPMENT II: characteristics of young children; developmental stages; health; safety; nutrition; child care principles

55.4211.0 CLOTHING AND TEXTILES I: construction of products involving textiles, fabric, and yarn; sewing machine use; visual and motor integration skills

55.4221.0 CLOTHING AND TEXTILES II: basic clothing construction; pattern and textile selection; zipper applications; hem finishes

55.4311.0 FOOD AND NUTRITION I: introduction to nutrition; basic cooking principles; kitchen survival; food buying

55.4321.0 FOOD AND NUTRITION II: planning and preparation of simple meals; nutrition; baking techniques; budgeting

55.4411.0 HOME ECONOMICS WORK STUDY I: unpaid practice and mastery of home economics skills at a work station

55.4421.0 HOME ECONOMICS WORK STUDY II: continued unpaid practice and mastery of home economics skills at a work station

55.4511.0 HOME ECONOMICS WORK EXPERIENCE I: paid on-the-job training in home economics skills

55.4521.0 HOME ECONOMICS WORK EXPERIENCE II: continued paid on-the-job training in home economics skills

55.5: INDUSTRIAL ARTS

55.5011.0 GENERAL INDUSTRIAL ARTS I: introductory course; basic skills; woods; metals; plastics; home and tool crafts; tool familiarization

55.5021.0 GENERAL INDUSTRIAL ARTS II: intermediate course; occupational orientation; basic skills, woods, metals; plastics; home repair

55.5031.0 GENERAL INDUSTRIAL ARTS III: more advanced course; individual projects; woods; metals; plastics; electricity; tool maintenance

55.6: SERVICE OCCUPATIONS

55.6111.0 **COSMETOLOGY/BARBER I:** shampooing; supply replacement; hygiene; cleaning and maintenance of environment, equipment, and supplies

55.6121.0 **COSMETOLOGY/BARBER II:** elementary hair care; shampooing; maintenance of supplies and equipment

55.6211.0 **CUSTODIAL AND HOUSEKEEPING SERVICES I:** training in techniques for cleaning and maintenance; waxing floors; special machinery; window and metal surface cleaning; snow removal; grounds maintenance

55.6221.0 **CUSTODIAL AND HOUSEKEEPING SERVICES II:** general custodial training; grounds maintenance; commercial and industrial buildings; simple maintenance and repair

55.6311.0 **FOOD SERVICES I:** training for food service; cook; kitchen helper; dishwasher; baker; waiter/waitress; bus person; cafeteria server; fry cook; fast food; sandwich making; salad and salad bar preparation; cashier

55.6321.0 **FOOD SERVICES II:** continued training in food service occupations

55.6411.0 **MISCELLANEOUS SERVICES I:** drycleaning and laundering; library assistance; mortician assistance; companion to the aged

55.6421.0 **MISCELLANEOUS SERVICES II:** continued training in personal service occupations; drycleaning and laundering; library assistance; mortician assistance; companion to the aged

55.6511.0 **SERVICE OCCUPATIONS WORK STUDY I:** unpaid practice and mastery of service occupations skills

55.6521.0 **SERVICE OCCUPATIONS WORK STUDY II:** continued unpaid practice and mastery of service occupations skills

55.6611.0 SERVICE OCCUPATIONS WORK EXPERIENCE I: paid on-the-job training in service occupations

55.6621.0 SERVICE OCCUPATIONS WORK EXPERIENCE II: continued paid on-the-job training in service occupations

55.7: PRECISION PRODUCTION

55.7111.0 GRAPHIC AND PRINTING COMMUNICATIONS I: lettering and signs; book binding; introduction to printing techniques

55.78121.0 GRAPHIC AND PRINTING COMMUNICATIONS II: more advanced work; sign painting; book binding; printing production

55.7211.0 LEATHERWORK AND UPHOLSTERY I: materials preparation; tool familiarization; cutting; sewing

55.7221.0 LEATHERWORK AND UPHOLSTERY II: additional experience; tool care; patterns and design; repair work

55.7311.0 MEATCUTTING I: operation, cleaning, and maintenance of meatcutting equipment; operating scale; preparation of carcasses for consumer size portions

55.7321.0 MEATCUTTING II: cutting, trimming, and preparing meat, fish, poultry for wholesale or retail sale; weighing and pricing; display and refrigeration

55.7411.0 PRECISION PRODUCTION WORK STUDY I: unpaid practice and mastery of precision production skills

55.7421.0 PRECISION PRODUCTION WORK STUDY II: continued unpaid practice and mastery of precision production skills

55.7511.0 PRECISION PRODUCTION WORK EXPERIENCE I: paid on-the-job training in precision production

55.7521.0 PRECISION PRODUCTION WORK EXPERIENCE II: continued paid on-the-job training in precision production

TRADES AND INDUSTRIAL

55.8 CONSTRUCTION

55.8011.0 GENERAL CONSTRUCTION TRADES I: introductory level training in one or more construction trades; basic skills; use and maintenance of hand tools

55.8021.0 GENERAL CONSTRUCTION TRADES II: general training in one or more of the construction trades; masonry; carpentry; electricity; plumbing; blueprint reading; power tools

55.8031.0 GENERAL CONSTRUCTION TRADES III: more advanced training; carpentry; masonry; electrical; plumbing; estimating; code compliance

55.8111.0 BRICKMASONRY, STONEMASONRY, AND TILE SETTING I: basic bricklaying; use and care of hand tools; brick bonds; concrete block plastering

55.8121.0 BRICKMASONRY, STONEMASONRY, AND TILE SETTING II: more advanced bricklaying; power equipment; cutting; blueprint reading; tile finishing; plastering

55.8211.0 CARPENTRY I: basic skills; use of woodworking power equipment and hand tools; safety; assembly techniques

55.8221.0 CARPENTRY II: forming; framing; blueprint reading; code compliance; roofs, floors; drywall

55.8311.0 PLUMBING I: basic skills in layout, assembly, and repair of pipes, fittings, and fixtures; tool familiarization and care; safety

55.8321.0 PLUMBING II: further skills development in layout, assembly, and repair of pipes, fittings, and fixtures; blueprint reading; code compliance

55.8411.0 CONSTRUCTION TRADES WORK STUDY I: unpaid practice and mastery of construction trades skills

55.8421.0 CONSTRUCTION TRADES WORK STUDY II: continued unpaid practice and mastery of construction trades skills

55.8511.0 CONSTRUCTION TRADES WORK EXPERIENCE I: paid on-the-job training in construction trades

55.8521.0 CONSTRUCTION TRADES WORK EXPERIENCE II: continued paid on-the-job training in construction trades

55.9 MECHANICS AND REPAIRERS

55.9011.0 AUTO SERVICE I: introductory training in auto servicing; tool use; service station attendant training; tire service; road service

55.9021.0 AUTO SERVICE II: general training in basic auto maintenance; oil change; tire service; state inspection codes; service station attendant training; emergency road equipment

55.9111.0 AUTO SERVICE, WORK EXPERIENCE I: paid on-the-job training in auto service occupations

55.9121.0 AUTO SERVICE, WORK EXPERIENCE II: continued paid on-the-job training in auto service occupations

V. Resource Services and Courses (56 Series)

(All 56-series courses are limited to students with IEPs.)

56.--: SUBJECT AREA SERVICES

56.2300.2 **SPECIAL EDUCATION LANGUAGE ARTS:** not elsewhere classified

56.2301.2 **RESOURCE LANGUAGE ARTS/ENGLISH:** resource English; resource language arts; learning problems English; basic English/language skills; vocabulary development

56.2309.2 Resource Language Arts/English, not for credit

56.2310.2 **SPECIAL EDUCATION READING:** not elsewhere classified

56.2311.2 **RESOURCE READING:** resource reading; word attack skills; vocabulary development; comprehension and interpretation

56.2319.2 Resource Reading, not taken for credit

56.2320.2 **SPECIAL EDUCATION WRITING:** not elsewhere classified

56.2321.2 **RESOURCE WRITING:** resource writing; sentence and paragraph development; forms and applications; letter writing

56.2329.2 Resource Writing, not for credit

56.2700.2 **SPECIAL EDUCATION MATH:** not elsewhere classified

56.2701.2 **RESOURCE GENERAL MATH:** resource math; learning problems math; calculating devices; money management; basic math skills

56.2709.2 Resource General Math, not for credit

56.2711.2 **RESOURCE VOCATIONAL MATH:** calculation; measurement; practical shop uses; estimation; job skill development

56.2719.2 Resource Vocational Math, not for credit

56.2721.2 RESOURCE CONSUMER MATH: budgets, taxes, interest, loans, financial planning

56.2729.2 Resource Consumer Math, not for credit

56.4000.2 SPECIAL EDUCATION GENERAL SCIENCE: not elsewhere classified

56.4001.2 RESOURCE GENERAL SCIENCE: combined basic science study; life science; human body; physical science; basic science concepts; applied science

56.4009.2 Resource General Science, not for credit

56.4500.2 SPECIAL EDUCATION SOCIAL STUDIES: not elsewhere classified

56.4501.2 RESOURCE SOCIAL STUDIES: citizenship; resource social studies; learning problems social studies; consumer skills, history and geography

54.4509.2 Resource Social Studies, not for credit

56.9: GENERAL RESOURCE SERVICES

56.9001.2 GENERAL TUTORIAL SERVICES: individualized instructional assistance to support regular courses; as-needed study or survival skills support

56.9009.2 General Tutorial Services, not for credit

56.9101.2 RESOURCE STUDY SKILLS: study skills; resource study skills; learning problems

56.9109.2 Resource Study Skills, not for credit

56.9201.2 SCHOOL AND SOCIAL SURVIVAL SKILLS: strategies for negotiating school; school behavior

56.9209.2 School and Social Survival Skills, not for credit

56.9301.2 **RESOURCE SURVIVAL SKILLS:** general survival skills; independent living; social skills; daily living skills

56.9309.2 Resource Survival Skills, not for credit

56.9401.2 **HANDICAP SPECIFIC SUPPORT SERVICES:** speech therapy; mobility training; auditory or visual training

56.9409.2 Handicap Specific Support Services, not for credit

56.32: RESOURCE VOCATIONAL COURSES

56.3201.2 **RESOURCE CAREER EXPLORATION/PREVOCATIONAL SKILLS:** resource career preparation; employability skills; job readiness; job interests; career options

56.3209.2 Resource Career Exploration/Prevocational Skill, not for credit

56.3211.2 **RESOURCE TRANSITION SKILLS:** school-to-work transition; planning for postsecondary training or education; job application and interviewing

56.3219.2 Resource Transition Skills, not for credit

CODING CONVENTIONS FOLLOWED

1. Courses with regular curriculum titles (with or without special education identifiers, e.g., biology, LD algebra, EMR world geography were coded from the CSSC. Courses with generic titles and special education identifiers (e.g., EMH math, LD social studies) were coded from the appropriate special education series (54, 55, 56).

2. Any course with a regular curriculum title plus a special education identifier (e.g., LD algebra, resource American history) received the regular CSSC code with a 2 in the seventh digit.

   EXCEPTION - Those courses with regular curriculum titles and special education identifiers indicating moderate to severe cognitive handicaps (e.g., EM world history, MH life science) received the regular CSSC code with a 0 in the seventh digit.

4. Any course with Resource in the title received a 2 in the seventh digit. Those "resource" courses with generic titles (e.g., math, social studies, science) were coded from the 56 series.

5. Any course designated just Resource (room, program, support, etc.) was given the code for General Resource Services (56.9001.2).

6. When the school offered more than once level of a course in the regular curriculum e.g., basic American history, American history, honors American history) and special education students took a special education version of that course (e.g., LD American history), the CSSC code used was that for the basic level plus the appropriate seventh digit. In this example the code would be 45.0809.2.

7. It was assumed that special education students were enrolled in regular vocational courses, unless specifically noted otherwise. These courses received the regular CSSC code with 1 in the seventh digit.

8. If a vocational course had a special education identifier in the title or on the transcript (e.g., special education small engines), it received a regular CSSC code with 2 in the seventh digit.

   EXCEPTION - If the school catalog described a functional level vocational program, or the transcripts indicated the students were in a full-day, self-contained functional curriculum, then the special education vocational courses were coded from the 55 series with a 0 in the seventh digit.

8a. If a vocational course taken by functional curriculum students was not adequately represented in the 55 codes (e.g., special education machine shop) it was given the regular CSSC code with a 0 in the seventh digit.

9. Courses with special education identifiers indicating emotionally handicapped were coded from the CSSC or the 56 series with a 2 in the seventh digit, unless descriptive material sent by the school indicated a more functional level curriculum.

10. In the absence of more specific information, it was assumed that generic special education courses taken by students who spent more than one half of the school day in a self-contained special education curriculum should be coded from the 54 series.

11. Whenever several periods a day were designated merely special education, special day class, EMH or some other general special education term other than "Resource," they were coded as Functional Academics (54.2401.0).

12. If there was no way of determining whether a given special education course was at the resource or functional level, (e.g., special education science), it was given the appropriate code from the 56 series with the designation, Not Elsewhere Classified.

13. If a school indicated two distinct special education programs (most frequently encountered examples--EMH program and LD program), then the two programs were coded at different levels (e.g., EMH, 54 series; LD, 56 series).

14. In coding functional language arts, the code for functional language arts I (54.2011.0) was given for each time taken unless school materials or the transcripts indicated required mastery of sequential course levels.

15. A health course with special education identifiers received the regular CSSC code with 2 or 0 in the seventh digit, unless school materials indicated functional level emphasis on hygiene and grooming, in which instance the code given was 54.3301.0.

16. Half to full-day, undifferentiated self-contained special education classes with a vocational or prevocational component received the code for combined vocational/academic preparation (55.0401.0).

17. When credit was granted for work as a student assistant or teacher aide, the regular CSSC code was used with a 1 in the seventh digit.

    EXCEPTION - When the credit was earned for assisting with a special education class, the seventh digit was 0 or 2 depending upon the coding of the student's other special education classes.

18. When special education students took sign language or braille they received the regular CSSC code with a 2 in the seventh digit. All other support services for specific handicaps were coded handicap specific support services, 56.9401.2.

19. In the absence of specific course descriptions, courses with the following prefixes or suffixes were coded 54, 55, or CSSC with a 0 in the seventh digit: EMH, EMR, TMH, TMR, MH, MI, DD, DH, MR.

20. In the absence of specific course descriptions, courses with the following prefixes or suffixes were coded 56 or CSSC with a 2 in the seven digit: LD, SLD, SED, ED, SBD, BD, BH, EI, EH.

21. Courses taken by gifted and talented students in the special education sample were given the appropriate CSSC codes with 1 in the seventh digit.

22. It was assumed that special education students were enrolled in regular physical education unless specifically noted otherwise.

23. When language was encountered which was not self-explanatory in determining coding levels (e.g., adaptive program, applied, alternative program, etc.) the school was called to determine whether resource or functional level coding was more appropriate.

24. When special education identified English had the same title and sequence indicators as English in the regular curriculum, it was given the regular CSSC code for that grade level with a 2 in the seventh digit.

25. Independent or individualized study was given the regular CSSC code with a 1 in the seventh digit unless school information indicated it was specifically for special education.

26. Homebound instruction received regular CSSC codes unless there were special education identifiers in the titles.

APPENDIX E
DEFINITION OF DESCRIPTION OF COMMUNITY (DOC) AND SAMPLING DESCRIPTION OF COMMUNITY (SDOC)

APPENDIX E

DEFINITION OF DESCRIPTION OF COMMUNITY (DOC) AND SAMPLING DESCRIPTION OF COMMUNITY (SDOC)

Assignment of DOC Codes

DOC codes were assigned to cooperating schools on the basis of SDOC (sampling description of community) codes assigned to each county for 1986 NAEP sampling purposes, and on information from tables and maps from the Census Bureau's publication, Number of Inhabitants.

The following definitions of DOC codes were used in this study.

DOC code	Class	Limits
1	Big City (BC)	Within the city limits of a city with population greater than or equal to 200,000 [or within the city limits of one of two or more central cities of an urbanized area (UA) with combined population greater than or equal to 200,000.]
2	Urban Fringe (UF)	Outside the city limits but within the urbanized area of a Big City (BC)
3	Medium City (MC)	Within the city limits of a place with a total population greater than or equal to 25,000 but less than 200,000; the place must not be in the UA of a BC.
4	Small Place (SP)	Open country or a place with a total population less than 25,000; the place must not be in the UA of a BC.

SDOC codes were defined as follows:

SDOC 1 - SMSA counties containing all or part of a central city of 200,000 or more population (Big City) in 1980.

SDOC 2 - Remaining counties in Big City SMSA's.

SDOC 3 - Other counties containing all or part of a place with 25,000 or more population in 1980.

SDOC 4 - Counties not qualifying for SDOC 1, 2, or 3 and not classified as "extreme rural" (SDOC 5).

SDOC 5 - Counties not classified as SDOC 1, 2, or 3, having less than 10,000 total 1980 urban population, having non-zero farm employment, and having relatively high values of an "extreme rural" index, computed based on county labor force occupational classifications.

The procedure used in assigning a DOC code to a school depended on the SDOC code of the county as follows:

A. **Counties in SDOC 1**

- For schools in these counties we identified cities of 200,000 persons or more Big Cities and Urbanized Areas (UA's) of these Big Cities based on data on the Census Bureau publication, Number of Inhabitants.

- Based on the post office address and ZIP code of the school, it was determined whether the school was located in a central city -- assigned DOC=1 -- or in an Urbanized Area of a Big City -- assigned DOC=2. The determination was made using census tables and maps.

B. **Counties in SDOC 2 or SDOC 3**

- For schools in these counties, those in urbanized areas of a Big City were identified and assigned a DOC code of 2.

- For schools not in the UA of a Big City, we used Table 5 in the Number of Inhabitants publication to determine whether or not the place where the school was located had a population of 25,000 or more, in which case the school was assigned a DOC=3, or a DOC=4 if the population was less than 25,000. The ZIP code directory and ZIP code maps were used to resolve cases where the city in the school's address was not listed among the places in Table 5.

C. **Counties in SDOC 4 or SDOC 5**

- Because of the definition of SDOC codes 4 and 5, none of the schools in these counties could be in a central city of a Big City nor in a UA. Consequently, all schools in places with populations of 25,000 or over were assigned a DOC code of 3. Otherwise, they were assigned a DOC code of 4.

Results of DOC Computations

Table E-1 shows the distribution of cooperating schools and codable transcripts by DOC.

Table E-1. Distribution of cooperating schools and codable student transcripts, by DOC: 1987 High School Transcript Study

	Schools				Student transcripts			
	Unweighted		Weighted		Unweighted		Weighted	
DOC	Count	%	Count	%	Count	%	Count	%
Big city	90	20.7	2,517	11.9	7,991	23.4	730,494	17.0
Urban fringe	91	21.0	3,898	18.4	8,660	25.2	1,161,796	27.1
Medium city	64	14.7	2,398	11.4	6,243	18.3	669,706	15.6
Small place	189	43.5	12,315	58.3	11,250	32.9	1,729,028	40.3
Total	434	100.0	21,128	100.0	34,144	100.0	4,291,025	100.0

APPENDIX F
NATION AT RISK UPDATE STUDY WEIGHTING PROCEDURES
(1987 COMPONENT)

APPENDIX F

NATION AT RISK UPDATE STUDY WEIGHTING PROCEDURES (1987 COMPONENT)

The procedures used for weighting the Nation Risk Update Study data were largely the same as those employed in weighting the complete 1987 High School Transcript Study data file, as described in Sectoin 6 of this report. The major points of difference were as follows:

- The sparseness of data led to the formation of only 42 adjustment cells for the school nonresponse adjustment, and 18 cells for the student nonresponse adjustment for undercoverage of nonhandicapped/non-grade 11 students. The rules governing the formation of these cells were the same as for the full sample.

- The student nonresponse adjustment for missing or uncodable transcripts was computed for 20 adjustment cells suggested by categorical modelling of nonresponse patterns. These cells were defined as follows:

<table>
<tr><td colspan="2">Handicapped-sampled students (1 cell)</td></tr>
<tr><td>1986 NAEP materials
used for Transcript sampling

Northeast vs. other regions
by
grade 11 vs. other grades
by
age 17 vs. age 18
by
assessed vs. absent
(12 cells)</td><td>Transcript sampling not using
1986 NAEP materials

Non-whites in Central region

age 17 vs. age 18

(2 cells)</td></tr>
<tr><td>NAEP excluded students
by region
(4 cells)</td><td>Whites or students
not in Central region
(1 cell)</td></tr>
</table>

- The "design effect" associated with variability in sampling weights was $1+V^2 = 1.40$, where V^2 is the relvariance of the nonresponse adjusted weights for student transcripts used to produce the NARUS tables (nonhandicapped 1987 high school graduates who were in grade 11 in academic year 1985-86).

- The trimming algorithm resulted in the trimming of weights in 5 schools.

- Poststratification was performed using 26 adjustment cells only, down from 39, since students who were not in grade 11 were not in-scope for NARUS. The poststratification factors were as shown in Table F-1.

- In computing replicate weights for use in variance estimation with the jackknife procedure, of all the adjustments made to the base weight, only the poststratification factor was recalculated by replicate. Thus, to the extent that nonresponse adjustments were made across jackknife pair halves, the replicate weights do not fully reflect the effects of the nonresponse adjustments on the sampling variance.

Table F-1. Poststratification factors for Nation at Risk Update Study by age / grade class and poststratification cells

Cell	Age 17 / Grade 11	
	Grade and age	Grade only
1	1.0282	1.1581
2	1.1213	1.0547
3	1.2835	1.3992
4	0.7374	0.8548
5	1.1645	1.4895
6	0.7794	0.9358
7	2.1598	1.7309
8	0.8982	1.2889
9	0.8538	1.4157
10	1.0844	1.1690
11	1.1400	1.5146
12	1.3919	1.5535
13	0.8455	0.9250

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